JUNE, 1881.

EVERGREENS of different kinds have been badly scorched, if the word is allowable, during the severe weather of the past winter. A number of winters preceding the present one have been comparatively mild, and it appeared almost justifiable to expect that we might have the pleasure of seeing in our grounds fine specimens of that most graceful of evergreens, the Lawson's Cypress. But these hopes are now destroyed, and it will only be possible to succeed by giving some kind of winter protection to the trees of this species. Large specimens, or those from twelve to eighteen feet high, are so browned that they appear as if a fire had swept through them. To be sure, they are not dead, but as ornamental objects they are ruined; the disfigurement is confined mostly to the south and west sides. The really hardy conifers of this region are few, and for this reason our advice to horticulturists is not to give up Cupressus Lawsoniana, but to protect it, and do it systematically and persistently. A specimen of English Yew in this neighborhood has for years been protected by canvass so as to go unharmed through the winter, and it is now a fine object, the only one of its kind in this region. In the same manner the Cypress might be protected with a canvass properly prepared with cords to make it fast to the tree, so as to be secure against any wind; the north and northeast sides of the tree might be exposed and the rest covered, and as the tree advances in height it would be necessary to lengthen the canvass year by year. So much labor is the price of Lawson's Cypress in this part of the country. If a position can be given the young Cypress where it will be sheltered by Pines and Spruces that have already attained a height of twenty feet, it will suffer much less, but even then it is not always safe.

A few specimens of Douglas' Spruce in this section have attained considerable size, but all have been badly browned; this tree will receive very little attention from our planters hereafter. It is a beautiful tree, but must have a more southern, or a more favored, locality.

The lofty Bhotan Pine, or P. excelsa, has stood the ordeal well, and it may be depended upon; the leaves are only slightly browned. It is one of the most elegant of the Pine tribe. Nordmann's Silver Fir, Abies Nordmanniana, gives a very good account of itself, and we think it can be relied on; it is only a little browned, and this may not happen again in many years. It is one of the handsomest of the firs, and when better known will be highly prized.

Some of the Retinisporas, Japan evergreens, have come through the winter quite unharmed. The best and handsomest one, so far as we now have the means of judging, is R. pisifera. Apparently, it is perfectly hardy here; trees ten feet high bear no mark of injury. It is a tree of very graceful form, with a peculiar feathery appearance of the leaves. R. squarrosa is a somewhat similar tree, with a darker and bluish cast of color to its foliage; this, too, has borne the past winter well. Apparently there is a good future in store for the Retinisporas in this country.

BEAUTIFUL RURAL HOMES.

Our country abounds with places of great natural beauty that only require the hand of cunning and skill, directed by cultured taste, to develop them into the most exquisite scenes that ever delighted painter or poet. The principle that underlies such improvement is the recognition and display of the natural features and expressions of the scenery. The residents of villages, or the suburbs of them, are most favorably situated to indulge their taste in beautifying places of moderate extent. No great wealth is necessary for this purpose, but a genuine love of art and nature. A place of not more than three to five acres may possess that combination of a bit of native woodland, of open field with here and there a handsome tree, a flowing stream, a pond or lake view that renders it capable of being moulded into one of earth's fairest scenes.

A QUIET WATER SCENE.

The business or the professional man will find in a pursuit of this character a proper change from his ordinary mental occupation that will ensure him health of both body and mind, and enable him with greater ease and ability to perform the duties of his calling. The lawn, the flower, the fruit and the kitchen garden has, each, its own charms, and its own interest, but happy should be the possessor of that home that may combine all these with the woodland, the meadow, and the stream, and himself have the ability to recognize and appreciate their æsthetic claims. With the growth of taste among our people we may expect to see it directed to the purpose we are now considering, and whoever engages in beautifying a country home does much to educate and refine the taste of the community. Without for a moment disparaging purely moral forces, yet, it is certain there is much in one's surroundings that affect their influence upon him. Self respect is a factor of the character of individuals and of communities, usually too little estimated by moral reformers. As the boy or the girl, the man or the woman, who walks well-dressed among companions is less apt to do a mean act or violate the amenities of social intercourse, so one, who with a laudable pride improves his home and delights in its beauty, is by that means a better citizen himself and a source of virtuous strength to his neighbors. Therefore, although there be no moral power in art considered merely as such, as, also, there is none

A HALF-WILD GARDEN.

in any truth of itself, yet, as it relates to man and affects him, he becomes more susceptible to the influences of higher law; and it is the duty of every well-wisher of his kind to favor its growth. One of the peculiar claims of horticulture is that it benefits every one. The beautiful painting, the exquisite statue, or the handsome building can be enjoyed by comparatively few; but that, like the sunlight, the pure air, the sweet rain, and the dews of heaven, is for all. Let, then, the children be reared and nurtured under its beneficent sway, let children and youth find pleasure and instruction in the plants of the garden, the field, and the wild-wood, in insects and animals of land and water; let mature years here find employment

for the trained intellect while it investigates the wonders of nature as exhibited in the various phenomena of life; and old age, too, shall pass more pleasantly with its pathway through a garden. Thus, may "both young men and maidens, old men and children" look up through these works of nature to Him who "hath also stablished them forever and ever; mountains, and all hills; fruitful trees, and all cedars."

CHRYSANTHEMUMS.

The perennial Chrysanthemums have been obtained by us indirectly from Eastern China and Japan. The Chinese varieties were first taken to European gardens in the year 1764, and thence were afterwards brought to this country. The Japanese varieties are of much later introduction, having been sent to England first by the botanist and traveler, ROBERT FORTUNE. These plants have had a large share of attention from gardeners, and innumerable varieties have been produced, and older kinds are being constantly thrown aside to give place to new seedlings.

The style of flowers of the Japanese section may be seen in the colored plate in figure 7, Laciniata, and 9, Fair Maid of Guernsey, which is the principal large white flower of the group. The small-flowered ones are called Pompons, and are represented in the plate by number 1, Canary Bird, and 2, Ebornella. The Pompons

JAPANESE CHRYSANTHEMUMS.

are said to be derived from a species called the Chusan Daisy, botanically, Chrysanthemum Indicum. The other varieties, 3, Alfred Salter; 4, Mrs. Keyes; 5, Madame Dumage; 6, Montgolfier, and 8, Hermione, are proper Chinese Chrysanthemums, or seedlings of C. Sinense, although this term is frequently used in a popular way to apply to all kinds mentioned, in order to distinguish them from the species and varieties of annual Chrysanthemums. The variation in form noticed in the last named sorts is due to breeding and selection under cultivation.

The plants are of value for the production of flowers in autumn and early winter. They are

POMPON CHRYSANTHEMUM.

easily propagated by cuttings, suckers, and divisions of the roots; but as suckering is one of the habits of the plants and has a tendency to diminish the size of the flowers, the plants are increased best by cuttings—taken any time in the spring they will easily root. The young plants should at first be potted in small pots, and afterwards be shifted to those of a larger size. When they have again filled the pot with roots they should be placed in five-inch pots, which will be large enough for them to complete their growth and blooming in.

The plants naturally grow up straight and make no branches until a foot or more high, but the beauty of a well-grown plant is to be furnished with branches from the base upwards. To secure this condition, it is necessary when the plants are about six inches high to pinch off the terminal bud, which will cause the buds below to swell and break, thus forming branches; by pinching in the ends of the shoots at successive stages of growth the plant will be kept under control, and ultimately a strong, bushy plant secured. The pinching, or stopping of the shoots, should not be continued beyond the latter part of August, or it will prevent the setting of buds in proper time. Equal parts of good loam and old rotted cow-manure form a suitable soil. An after-dressing of super-phosphate or bone-dust is good, as, also, is an occasional watering with liquid manure. A plentiful supply of water must be provided during active growth.

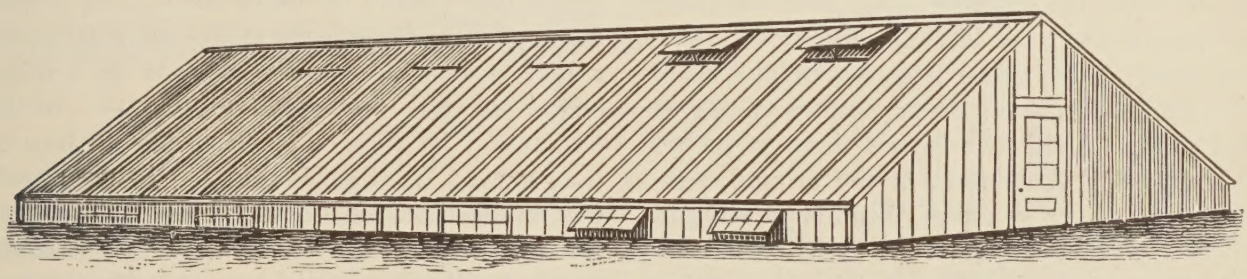
THE COLD GRAPERY.

In the cultivation of many exotic plants their foreign origin is constantly manifested by their refusal to submit to the climatic conditions that have proved acceptable to the native or indigenous vegetation. As many of the choicest ornamental and fruiting plants in cultivation have been procured from climates that differ widely from our own, numberless devices and practices of the gardener have in view the object of securing their healthy growth in localities where the natural conditions are unfavorable to them. Hot-houses, greenhouses, hot-beds, cold-frames, conservatories, bell-glasses, and other apparatus and appliances are employed for the same general purpose, which is the securing of conditions favorable to the health and vigor of the plants to which they are devoted.

In Great Britain and in many parts of Europe glass houses are built, not only for tropical fruits, such as Oranges, Lemons, Pine Apples, &c., but for Cherries, and Peaches, and Apricots; for this purpose they are known as orchard houses. Grapes have been cultivated in this way for a long time. In suitable climates it is preferable to raise the Grape in the open air. We are fortunate in this country in having a species of native Grapes suited to our climate, and that are capable of improvement by the ameliorating practices of horticulture; essential for the production of the finest fruit is the glass structure without heating apparatus, or, as it is called, a cold grapery. We do not hesitate to advise our readers, who are so inclined, to erect cold graperies; they can be built at no great cost, they are attended with comparatively little care, and the results attained are highly satisfactory. Many of these graperies are now in use all over the country, and few would be willingly deprived of them who have become accustomed to their delicious products. The effect of a glass house is to lengthen the season, both in the spring and in the fall, and to maintain a warm, moist atmosphere and equable temperature, all of which conditions are those required by the foreign or European vine, Vitis vinifera.

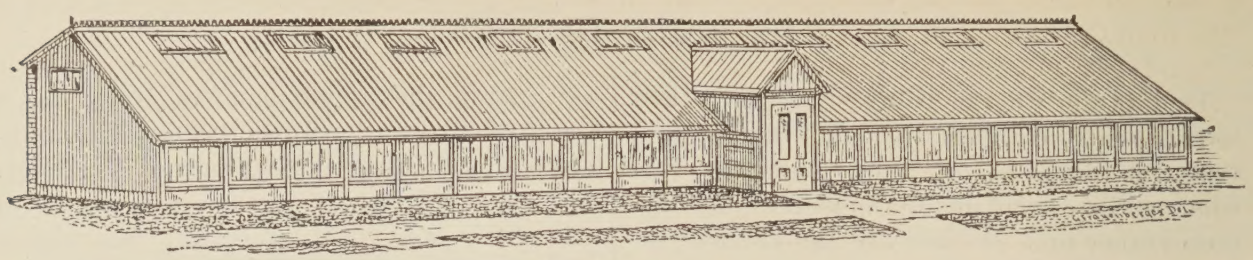
The ordinary care required by a medium-sized vinery is not more, nor more laborious, than that a lady of fair health and strength can well afford to bestow, as a healthful variation from usual domestic duties. There are times during the season when pruning, and training, and tieing up may demand assistance, but the daily routine of management of an hour or more might with pleasure and profit be performed by many a lady wanting diversion and interest as a proper mental stimulant.

Although a cold grapery should be devoted



SPAN-ROOF COLD GRAPERY.

but we are unfortunate in being unable to raise successfully in our grounds the delicious Grapes of France, Spain, and Italy. Nowhere in our land will they thrive well, except in some portions of California; even in the Southern States, where it might be supposed the conditions would be suitable, they do not succeed, unless it be in some localities of extremely limited areas, favored by peculiar environments. Those, therefore, who would enjoy these delicious fruits fresh from the vine must resort to glass structures, or graperies, as they are called. By the use of heat in graperies, the time of ripening of the fruit is greatly under control, and may be fixed for different seasons of the year; but this practice is expensive, and only those of ample means can indulge in it. But all that is to its original purpose, if satisfactory results are obtained from it, and not be diverted to any use that may in the least intefere with a crop of fruit, it will be found, in the northern part of the country, that in the early spring, before the vines can be started, it is a suitable place to sow seeds for early plants and quick-growing crops; especially with a cold-frame inside, that may be closed in the afternoon, crops of early Lettuce and Radishes may be raised, and seeds may be sown to produce young plants for the open ground. If one so desires, a small plant-frame in the grapery may be heated by an oil-lamp, and thus there will be a means of propagating by cuttings, or of germinating seeds rapidly and bringing forward young plants. All this may be done without interfering with



HALF SPAN-ROOF HOUSE.

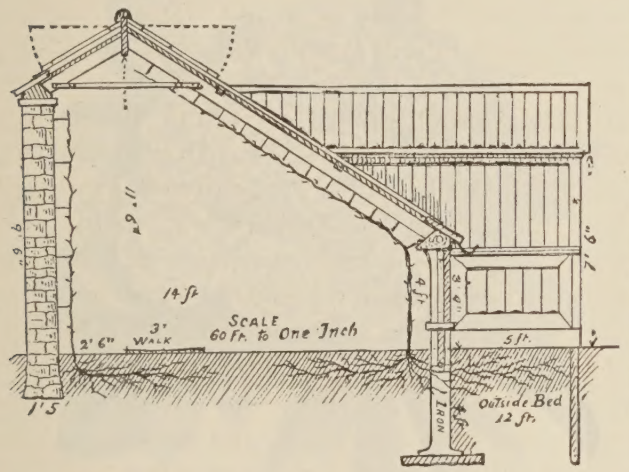
the vines, for, when they are ready to start, the weather outside will be such that heat can easily be maintained in hot-beds, or even cold-frames be employed. But it is not necessary to consider incidental advantages, since the fruit that may be obtained is worth all the outlay that may be incurred by those so situated that they may have this department connected with their gardens.

The construction of a cold grapery is so simple that any one interested in the subject may confidently undertake its erection. It is simply a glass house without any furnishing whatever, unless some wires that run along underneath the roof to support the vines, may be so called. The best form for a grapery is a span-roof, or double roof, as shown in the first illustration. The sides are two feet six inches high, the width twenty-three feet, the height to the ridge-pole twelve feet, and the length forty-eight feet. The rafters are placed three feet apart. Ten ventilators are placed at the ridge of the roof, five on each side; and ventilators are placed along the bottom, on each side, three feet apart. The house from which this sketch was made is built on cedar posts, standing six feet apart. A sill four inches thick is secured to the posts at the surface of the ground, and a plate runs along on top of them, supporting the lower ends of the rafters. A much better way is to build piers of stone or brick, starting them low enough to be secure from frost, and making them even with the surface, and resting the sills on them; short posts of the proper height standing on the sill will support the plate. The pitch of the roof should not vary greatly from forty-five degrees; it is no objection that it should be somewhat less than that angle, but should not greatly exceed it. The position of the house should be north and south, or as nearly so as possible. The ground that the grapery occupies must be well drained; this is a prime necessity, and there is no better way of accomplishing the object than by the use of tile drains; or, where stones are plenty, they may be employed, although there is danger of their being sooner obstructed than tile would be. A space on each side of the house, called the border, is thus perfectly drained, and then spaded and manured, and prepared as thoroughly as possible for the healthy growth and permanent welfare of the vines. The preparation of the border should also be given to the soil inside the house for at least a yard wide the entire length, and if all the available space inside should receive the same attention in manuring, digging, &c., it would be all the better. A good width for a border when first made is about ten feet, which may afterwards be increased to fifteen, twenty, or even twenty-five feet, according to the demands of the vines. Practical grape-growers are pretty generally agreed that there is no better way to make a border than to remove the soil over the whole space to a depth of two or three feet; two feet is probably sufficient. The bottom of the border should incline a little away from the house, so that the water that will rapidly filter through the soil during heavy rains will easily pass away to the drain laid to receive it. A very excellent and common practice is to cut a trench around the margin of the border a foot deeper than the rest of the excavation, and a foot and a half or two feet wide; thus, if the soil be taken out two feet deep, the bottom of the trench will be three feet below the surface of the ground. A slight inclination of the trench will enable it to convey the water promptly to the entrance of the main drain. The trench should be filled with stones even with the bottom of the border, and then over the whole surface be made a layer, six inches deep, of lime-rubbish, old mortar, bones, oyster and clam shells, and similar material. A good supply of lime is a necessity for the vine, and, if it can be given in the form of the materials mentioned, it serves the double purpose of affording nutriment and drainage. The soil that has been removed should be mixed with well-rotted manure, which in bulk will be about one-quarter as much as the soil, and about three pounds of commercial super-phosphate to each ten square feet of surface. This will make a rich and lasting border. Before returning the soil to its bed a quantity of sod, dug from an old pasture if possible, should be spread, grass side down, over the bones and rubbish that forms the bottom layer; after this the soil can be laid

in, and the border finished off so as to slope a little from the house.

Good yearling, or two-year-old, vines are planted in early spring, just inside the house, near the sill, setting one at each corner, and three feet apart along the sides, so that a rod, or vine, can be carried up each rafter; in the same manner they may be set at each end.

By keeping the temperature of the house low at first, the vines will have a chance to heal the root wounds and make some new rootlets before pushing much into leaf. The tops should be reduced to two or three buds, of which one only is to be allowed to grow. A very little water will be sufficient at first, but when the foliage begins to expand and the vine to grow freely more water should be supplied. In this stage, syringing the plants two or three times a day is very beneficial. The moisture of the atmosphere can be maintained by evaporation from the soil, and sprinkling in the central part of the house will keep up a supply. The necessary ventilation to keep the temperature



VERTICAL SECTION OF HALF SPAN-ROOF HOUSE.

down to 70° or 75° during the heat of the day should be given from the top of the house, and not from the side ventilators. The house should be shut early enough in the afternoon to keep up a good heat. As the season advances a more copious supply of water, both in the soil and on the plants, by means of the syringe will be called for; and the heat during the day time when the sun is shining brightly may be allowed to run as high as 90°, or even higher. As the vines grow they are to be tied up. A support, or frame work, is provided for them, of small iron rods or heavy wire, held in place by hooks driven into the rafters. The water supply is that of the rainfall on the house; gutters at the eaves receive the water, which is conducted to a brick or stone cemented cistern or tank, that most conveniently may occupy the center of the house, entirely under ground.

The after management of the vines is not difficult, although the treatment they require at all seasons should be well understood and faithfully practiced.

For a smaller house than the one now described, eighteen, or even sixteen, feet may be taken as the width measurement, and should something more ornamental be desired the roof can be given a curvilinear form by curving the rafters.

The second illustration, of a half span-roof house against a brick wall, is an exact representation, from original drawings, of a house constructed less than two years since, and now well stocked. The following facts in relation to it may be of interest:

There are twenty-two iron posts seven feet and nine inches long, three inches on the face and three inches deep, half an inch thick and hollow on one side; they are set four feet below the ground on flat stones, as shown in the engraving of a cross-section. Each post weighs 120 pounds, and the wooden plate is secured to the posts by iron bolts. The plate is cut out of 5x7 stuff, the rafters are 2x8 inches and fourteen feet long, and are placed at an angle of 33°, and are five feet apart. The house has twenty ventilators in the roof, ten in front and ten alternate in the rear, each 3x5 feet, and are worked by an apparatus that raises them all simultaneously. The front sashes between posts are four feet nine inches by two feet eleven inches. The base board below water-table is ten inches wide and extends two inches below the surface of the soil. The ends of the house are made of matched boards, double thick and with an air space, and are provided with ventilators. The house is 105 feet long, fourteen feet wide on the inside, and faces south. The highest point inside is eleven feet six inches, and the front inside is four feet. The glass all over the house, except the front sashes, is 8x10 inches, double thick. The vines are planted three feet apart in front, and along the wall are planted Nectarines and Peaches. One ton of bonedust and thirty loads of sod were used in making the border, which is four feet deep with one foot of stones at the bottom. The vines were set the middle of May, and were one year old plants; they grew to an average length of sixteen feet, and an inch in diameter, and show a good prospect for a crop of fruit this year. Of the varieties of Grapes suitable for a cold grapery, Black Hamburg is most valuable, and at least as many vines of it should be planted as those of all other kinds. Royal Muscadine will take preference as a white Grape. Besides these may be named Black Frontignan, Black Prince, Grizzly Frontignan, Bowood Muscat, Buckland's Sweetwater, Golden Hamburgh, and White Frontignan.

EARLY-FLOWERING SHRUBS.

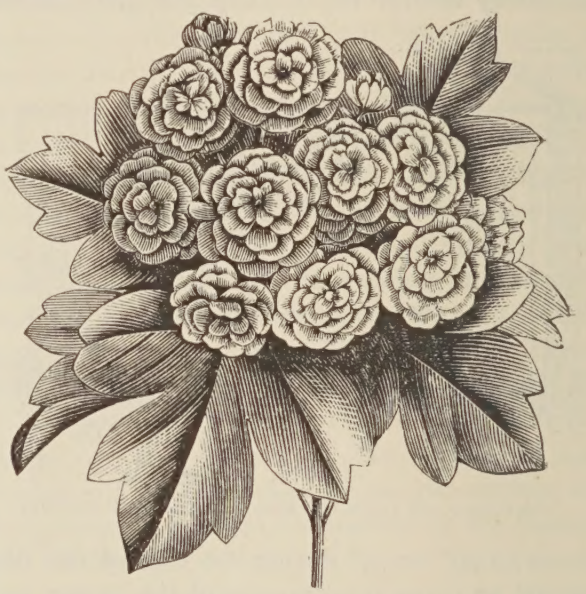
The earliest of our flowering shrubs is the Daphne Cneorum; before winter has passed, or the snows scarcely melted, its little clusters of flowers, as sweet, and as beautiful, and not much unlike the Trailing Arbutus, may be found in great abundance, for this little evergreen is usually loaded with flowers. These have scarcely passed before the Forsythia viridissima makes a conspicuous object in the shrubbery, as may well be imagined when the plants are from four to six feet in height, and the branches are literally covered with yellow, ragged, butterfly-looking flowers, without a leaf on the whole plant, and not one leaf fully developed among the whole collection of shrubs. It is a beautiful spring-flowering plant.

DAPHNE CNEORUM.

Before the Forsythia arrives at perfection, the Japan Quince begins to appear, with its glossy, bright leaves. This plant is not only one of the choicest of our shrubs, but the very best thing we possess for an ornamental hedge. It makes a hedge of considerable strength, and is used for protection, though in this section animals are not permitted to run at large, so that fences and hedges are of but little consequence. We gave an engraving of this shrub in the February number.

FORSYTHIA VIRIDISSIMA.

While traveling in the Old World, especially when viewing the parks and lawns of England, we have thought there were no shrubs superior, if at all equal, to the Flowering Thorns. The leaves are a beautiful, glossy green, the habit of the plant trim and neat, and it can be made to assume any form desired, while at the flowering season the whole plant, or small tree, for we have seen it fifteen feet in height, presents the appearance of a mammoth bouquet, the leaves being almost concealed by the flowers; just enough green showing to relieve the bright colors of the scarlets and pinks, and give a setting to the white varieties that is indescribably delicate and beautiful. The flowers are like clusters of miniature Roses. In some sections of this country, unfortunately, the leaves mildew in hot weather, and disfigure the tree and injure its growth.



FLOWERING THORNS.

The varieties of the Spice Bushes, Calycanthus, are very desirable plants, the flowers are of a dark chocolate color; but the peculiar spicy odor, not only of the flowers, but of the whole bush, makes this class of plants general favorites everywhere.

The Weigela is another very pretty flowering shrub. Like the Forsythia, it was found in China by FORTUNE, to whom we are indebted for so many of our best shrubs. There are several varieties, differing in the color of their flowers—pink, red, and white.

In the North most of our shrubs flower in June, and we shall make engravings of such as we think will be most interesting to our readers. We shall be pleased to answer inquiries and give engravings of any varieties about which our readers may desire information.

THE PLOWMAN.

The plowshare's silver gleam,
Behind the panting team,
Lights the brown furrow in the field,
And hope foretells the future yield
Of sun-tanned crops of wheat,
Ripening in genial heat.

How well he draws his line;
Through tangled grass and vine
The plowman scores the hill and vale,
Where Violets blue and Daisies pale,
Crushed by the gleaming share,
Sweeten in death the air.

Fair birds on every bough
Sing praises of the plow;
And groups of golden Daffodils,
Dancing in shadows of the hills,
Like happy girls at play,
Inspire the plowman's lay.

His mandates are obeyed;
The dumb brutes, unafraid,
Come at his call from pastures green,
Over the bars, half down, between
The meadow and the shed,
And by his hand are led.

Serene the plowman's life;
He's king—a queen his wife.
Right royal they; no crowns to press
The heart out of their happiness,
No threats, in undertone,
To hurl them from their throne.

He is a rural king,
And every living thing
Within his realm, the farm, obeys
When he commands. I sing his praise
In chorus with the birds
And bleating flocks and herds.

—George W. Bungay.

SOME TRAILING ARBUTUS.

There is a sheltered nook on the hillside yonder, a niche left by some discouraged woodcutter who, evidently, had arrived at the conclusion that it would not pay to cut his way through to the other side of the hill, and more's the pity he had not thought of it sooner. The place is fragrant with Ferns and Azaleas in their season, but in the early days of May it is the spot, of all others, to look for the delicate Arbutus.

I had been thinking of this for several days when, one morning, my friend Lucy sent me a special message to this effect: "The boys say the Arbutus is blossoming on the hill; let us go and get some!" And the same afternoon we found ourselves *en route* for the hill. We became aware of its steepness as we toiled slowly upward, and were more than willing to sit down upon a rock and

"View the landscape o'er"

while we recovered our breath. The valley was putting on its mantle of green for the summer, and the stream, a tributary of the Susquehanna, could be traced by the deeper color along its margin. The hills opposite are shaven quite to their summits in many places, and their bare, bleak sides look very desolate now, when the kindly covering of snow has departed and their summer uniforms have not yet been brought out. We sat on the rock and commented upon the scenery of the valley, its geology, the action of water in its formation, traces of glaciers, &c., wondering more than all how it looked when the red man held undisputed sway, when it was covered with forest, and the deer and the wolf, and even the bear, occupied their homes in comparative quiet. But the Arbutus is waiting, and we go on our way to the margin of the wood, gathering Wintergreen berries and Ground Pine, until we reach the spot where, half covered with last year's dried leaves, we find the light-green foliage and waxy blossoms. It is surely one of the loveliest wild flowers which this region produces.

John Burroughs, that unwearied walker and devotee of nature in her secluded haunts, says the perfume of flowers is like the gift of genius to man, appearing as often among the lowly as among the high born, a subtle, undefinable grace, which eludes all attempts to understand or analyze it, glorifying the commonplace, and elevating the most humble to a rank which the patrician may not despise; so the perfume of unattractive flowers gives them a value above the showy, hot-house productions,

which have only form and color to recommend them. In some parts of New England the Arbutus is called the Mayflower, perhaps in memory of the little bark which came to their shores bearing lovely flowers of purity and sacrifice, along with the strength and hardihood which enabled them to flourish upon the bleak rocks and shed their perfume down the ages.

LUCY and I filled our baskets and went home in triumph, and for several days our tables and mantel-pieces bore testimony to the fact that we had been in the woods.—N.

CUPHEA PLATYCENTRA.

Cuphea platycentra, is a very pretty, bushy, half-hardy perennial plant, belonging to the natural order Lythraceæ. It is a plant of dwarf habit, with lanceolate leaves; it seldom attains a foot in height, even when well grown. It produces its flowers all the year round in the greatest profusion, on the young branches and branchlets. The showy part of the flowers consists of a scarlet calyx-tube and short, purple petals tipped with white, thus giving it somewhat the appearance of a lighted cigar, from which circumstance the common name, Cigar Plant, has been given it by some persons.

CUPHEA PLATYCENTRA.

It is a plant of remarkable, ornamental appearance, both in the greenhouse and flower-border, and it is also an excellent basket plant.

With a little care as to treatment and cultivation, it will flower in profusion during the entire winter season. To enable it to do this, however, it requires a rich, light, sandy soil, good drainage, a temperature of 50°, a situation exposed to the sun, enough, and only enough, water to supply its daily wants; thus treated it will form "a thing of beauty." For the flower border it requires but little care and attention; it will thrive in ordinary-good garden soil, but, to grow it to perfection, prepare the bed by digging the soil to the depth of two feet, at the same time working in a good portion of well-rotted stable manure or leaf-mould. The plants should be pinched back occasionally, so as to keep them in shape. The surface of the bed should be stirred as often as necessary to destroy weeds, &c. The plants should not be set out until the middle of May, and they should be taken up and potted about the middle of September.

Propagation is readily effected by cuttings, also by seeds, which ripen freely. To obtain strong plants from seed, it should be sown in heat from March to the middle of April, in pots or pans of well-drained, light, sandy soil. Sow thinly and cover slightly, water when necessary, and, when the plants are up, place close to the glass. As soon as the plants are strong enough to handle, pot them off into small pots, or into boxes, one inch apart; when the plants are well established, remove them to a cold-frame, and gradually expose them to the air, and plant out when all danger of frost is over. The seed can also be sown in a cold-frame about the middle of April, or in a nicely prepared border in the open air about the 10th of May, but the plants will not flower so early. Do not allow the plants to become drawn.

The generic name is derived from *kuphos*, curved, in reference to the form of the capsule or seed-pod; and platycentra means flat-spurred, a term referring to the base of the calyx.

PAXTON, in his *Magazine of Botany*, in describing this Cuphea, says: "This species was named and described many years ago, by Mr. BENTHAM, from dried specimens, collected in Mexico, but it sprang up, through seeds accidentally imported with Mexican Orchids, in the establishment of J. ANDERSON, Esq., Regents Park, England."—CHAS. E. PARNELL, *Queens, L. I.*

WOODS IN SOUTH CAROLINA.

MR. VICK:—I've just laid down your charming little MAGAZINE. Just think, it is way down here in the sunny south, yet it brings to me many a pleasant thought from my northern friends. I find the April number still brighter and pleasanter than the preceding ones. I was pleased with "Aunt Fanny's" letter upon "House Plants," for I, too, am a lover of bright flowers and plants in our houses.

I wish some of the readers of your MAGAZINE could see the woods around "Mistletoe Vale;" they are lovely at this (mid-April) season of the year. Among the wild flowers to be seen are the Yellow Jessamine, Dogwood, Honeysuckle, Violets, Crab Apple, and a host of others, until one can hardly believe fairies do not exist, for the whole woods is a perfect bower of beautiful flowers and sunshine.—B. A. T., *Mistletoe Vale, S. C.*

THE BULB GARDEN.

If there is anything more refreshing, exhil erating and glorious than a garden of bulbs in the spring of the year, after months and months of cold and snow and biting winds, an old gardener has never found it out. How nice it is, after grumbling about the long winter and backward spring until you have exhausted your vocabulary and your patience, to accidentally find the Snowdrops blooming gloriously and the Crocus just peeping through the soil to see if winter has really gone. You Americans boast of your autumns, and they are worth boasting about, but give me the early spring garden—the transition from winter to summer; the resurrection, or new creation, for so it seems to our senses. I have the same love for the early spring flowers that I had half a century ago, when in the South of England, I grew spring bulbs largely, so that my garden obtained some little notoriety, and was visited by many people. I send you a sketch showing somewhat of the arrangement of several of my beds. As I wished to retain my flowers as long as possible, I provided a canvass covering for the principal beds. This was spread about two feet above the tallest flowers, and in this way they were protected entirely from the sun and the heavy rain storms. I was thus able to keep in perfection my beds of bulbs for many weeks —I hardly dare trust myself to say how many— and had Crocuses, Hyacinths, and Tulips all in flower at the same time. In this climate such a covering is more essential than in England, for the sun is more fierce, and we step from winter to midsummer heat without the least warning.

People here are so impatient that they often fail from this cause alone. They want to plant fruit trees that will bear next year, Asparagus that can be cut a month after planting, and they can hardly wait from fall to spring for bulbs to flower. They would like to plant bulbs in the spring and have flowers in a few weeks after planting. Florists receive plenty of orders from amateurs, for Hyacinths, Tulips, Crown Imperials, &c., in the spring, about the time that flowers appear in the gardens of their neighbors, which, of course, they cannot obtain, and the next autumn, the proper planting time, the subject is forgotten.

A good deal has been said and written about the soil for bulbs, but there need be no anxiety about this. Any one who has a good garden soil that will grow our common vegetables and flowers well, has a good soil for bulbs. It need not be very dry, only that the water does not lie upon the surface. Use plenty of well-rotted manure, not fresh, unless it be cow manure, which is the best of all for bulbs, and may be used in any condition. When the soil is very heavy, a little sand thrown around the bulbs at planting is very good, or it may be

mixed with the earth. In Holland sand is carried long distances to mix with the mucky soil in preparing the low land for the growth of Holland bulbs. As the best bulbs are imported from Holland, they are necessarily somewhat expensive, and, therefore, should receive whatever attention is necessary for their full development, and also for their preservation for future use. Some kinds, like Tulips, form new bulbs every year, but in all the roots are annual, so that removal causes no delay or injury to the flowering. After the tops die and the bulb is fully matured it can be taken up and stored away for autumn planting, or may be allowed to remain in the ground. In the latter case it will not grow until the proper time arrives. It seems to know its own time, and will not grow until it gets ready. I have taken two Hyacinths of the same variety, and potted one the latter part of August and the other the first of November, and there would be very little difference in the time of flowering. Then I have tried to keep bulbs out of the ground until the middle of January, so as to have late flowers, but they would start in spite of all I could do, and I have more often succeeded in ruining the bulbs than in securing late flowers.

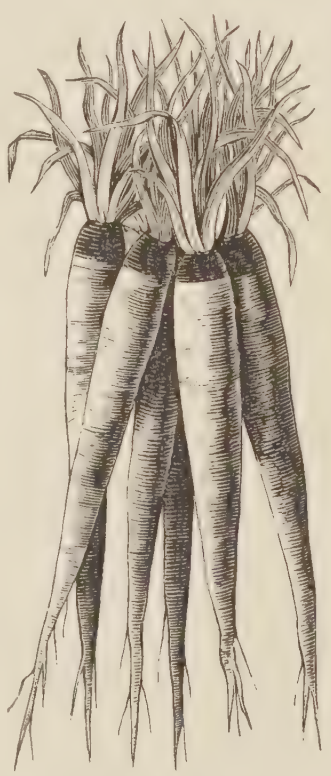
Cutting flowers does not injure the bulbs in the least, but cutting or bruising the leaves is certain to harm the bulbs more or less.

I had almost forgotten the Narcissus family, and I don't know anything sweeter than the Polyanthus Narcissus. Unfortunately they are a little tender for the Northern States, but by making my bed under the shelter of a hedge which furnishes protection from the northwest winds, and by giving the bed a good covering early in the winter, I have for many years been successful with this elegant flower. In the rude drawing I forward, you will see my Narcissus bed in the center. Where it will not succeed in the open ground, I would advise your readers to try a few in pots for the house.

In a future number I will, with your permission, speak about growing bulbs in the house, in pots and glasses, a most interesting winter work and pleasure.—AN OLD GARDENER.

SALSIFY.

The Salsify, or Vegetable Oyster, is one of the choicest of our family vegetables, considered as a luxury. It may not furnish as nutritious food as some other kinds, but of this I am not certain, though I am certain that if it were better known it would be more cultivated. The root resembles the Parsnip, but its flavor is much like that of the oyster, hence the popular name, Oyster Plant. There is no more trouble in growing this choice vegetable than Carrots; indeed, about the same treatment is needed. I like to sow early, because the seed germinates slowly, and in a deep, light soil, because then I get longer, straighter roots. I sow the seed in drills, from twelve to fifteen inches apart, and cover it not much more than an inch in depth; when the plants appear, thin to four or five inches apart in the rows. In September we begin their use, and continue to take them from the garden as needed until winter appears to be setting in, when a quantity are stored in a cool cellar, and covered with earth, for winter use. A portion remain in the ground for spring consumption, and we use them from the garden until they begin to go to seed, which will be some time in May. The roots are simply boiled, like Beets and Carrots, but sliced up and made into a soup they are delicious; indeed, they are used at our house in various ways, all good, but the mysteries of the kitchen are a sealed book to me.—J. W. M.



THE SALVIAS.

MR. VICK:—I do not think you have told the readers of your MAGAZINE the merits of the Salvias for autumn flowers in the garden, and later, in the house. The truth is, that so many writers exaggerate in their descriptions of flowers that, when you give a fair, honest description of a very excellent flower, the language is more moderate and the praise far less than some scriblers bestow on worthless plants. Your regular readers of course know the weight of your words, but comparative strangers would never realize what a desirable thing the Salvia is from your truthful descriptions. Last season I had six plants, and in decorating for a county fair in the autumn I found nothing so useful. Two of the largest were taken up and potted, and placed one on each side of the entrance to Floral Tent, and we needed no sign to show the crowd the tent where the flowers were displayed; these plants told the story. They were nearly six feet in height, and the long spikes of flowers were magnificent. I don't know of anything more beautiful. Two smaller ones I potted, after well-soaking the earth around the plants for a few days; then placed the pots in a cool, airy shed for about four days. They did not seem to wilt of consequence, except a little the second day, and soon recovered. They were then placed in the front hall, which is moderately light, and afforded us a great deal of pleasure. For a decorative plant I shall always recommend the Salvia.—SAGE.

PEAR-TREE BLIGHT.

Were it not for the Pear blight that destroys many more than half the Pear trees planted, and discourages planters, Pears would be as abundant and cheap in our markets as Apples, instead of being a luxury that few can enjoy, and only for a short season. Scores of theories as to its cause and cure have been published, and practiced, but the blight goes on unchecked, and our trees die, even when apparently vigorous and covered with fruit. The yellows, too, has worked sad injury to our Peach orchards. A new interest has been awakened on these subjects by the investigations of Professor BURRILL, who has recently made a report in relation to them to the Illinois Horticultural Society which will be closely scrutinized, and from which ultimate good may result.

As many of your readers may not fully understand the report, I shall endeavor to make it clear by a few statements. The lowest and most minute forms of vegetable life are always abundant in stagnant water, and in the moisture of damp places on the ground, on buildings, rocks and elsewhere. Water containing the soakings of decayed vegetation is especially suited to the life and growth of these organisms; and a favorite way of procuring specimens of them for examination, is to soak some hay in water and drain off the liquid; after a day or two it will be found to contain some of these living forms, which, as an illustration, we may say can be considered as sea-weeds, or rather, water weeds, invisibly small to the naked eye, and only to be discovered by the aid of a microscope. One form of these microscopic vegetable organisms is called Bacterium, and the experiments made a few years since by Professor TYNDAL upon the Alps showed that the spores or germs of these Bacteria are always present in the atmosphere, even in its purest conditions and at high elevations.

The discovery of Professor BURRILL is that Bacteria are present in the sap of diseased trees. He considers the presence of these foreign organisms to cause the diseased condition commonly known as pear-blight.

Further, Prof. B. found Bacteria present in the bark and pith of specimens sent to him of Peach trees affected with the disease known as "the yellows," but the roots presented no appearance of them.

When the presence of Bacteria in the diseased trees had been satisfactorily determined, "I began," says Prof. B., "July 1st, 1880, a series of experiments with the view of determining whether these organisms were really active agents in the observed changes, or simply accompanying other causes of destruction."

The experiments were made by introducing on to healthy trees pieces of diseased bark, after the manner of budding, and by inserting into the bark the point of a "sharp-pointed knife or needle dipped in the virus as it exuded from diseased trees, or which had been gathered and kept in a vial with distilled water."

Apple trees and Quince trees were also operated upon. "The note-book shows that of the Pear trees inoculated sixty-three per cent. became diseased, exhibiting all the characteristics, externally and internally, of the so-called fire-blight. The four inoculations of the Quince from the Pear virus were all successful."

The minute size of the little objects that has been revealed may be slightly comprehended by the statement that lying closely side by side it would require 12,731 of them to measure an inch, and that placed end to end 8474 would extend the same distance; thus it is seen that the width of each specimen is about two-thirds of its length. How these organisms obtain access to the cells of the plant is a mystery. On this point the following remarks are given:

"The most conspicuous change that can be observed by the aid of the microscope in the tissues affected with the blight, is the disappearance of the stored starch. The cell-walls are not dissolved or altered except the staining by oxygenized material in later stages of the disease. The protoplasm of young cells remains without alteration until death takes place. In older cells the protoplasmic lining of the walls can be made out after the starch has all disappeared. Unless the Bacillus does dissolve the cell-wall sufficiently to make for itself a passage way, it cannot possibly obtain entrance in the adult state; yet they may be found swarming in cells absolutely closed so far as a power of one thousand diameters can reveal. In studying this I have used a Spencer's one-tenth of recent construction, and have been unable to detect the least corroding of the cellulose wall. It is scarcely necessary to add that the young tissues affected by the blight have in their cell-walls no open pores, such as are seen in the cells of older wood; neither are there ducts or other channels for their passage. Accepting NAGELO'S theory of the molecular construction of the cell-wall, we can only understand how these organisms pass from cell to cell in their deadly work, by supposing their germs are less than the molecular openings, hence ultra-microscopical, and that in this condition they pass in water the cellulose barrier, and develop into visibility within, or that in the germ condition they are of such plastic consistency that, amœba-like, they are able to creep through the narrow

spaces between the molecules. It is well known that the spores of many parasitic fungi, *e. g. Peronospora infestans*, upon the Potato, in their germination, send through the epidermis of the leaf an exceedingly fine tube, through which the contents of the spore pass and accumulate in the swelling end of the penetrating tube. From the latter the growing mycelium itself makes its way through the walls of the inner tissues. The minute opening in the outer wall of the epidermis becomes closed and all indications of the entrance obliterated. If anything of this kind occurs in the penetration of our Bacillus, it is upon too small a scale to be made out.

After a cell has been invaded by the moving particles, the first thing noticed is the agitation of the starch granules. They swing to and fro like the Brownian movement on large particles. By passing along a thin fresh section from the healthy to the diseased parts, one can witness the gradual diminution of the agitated granules of starch until they disappear entirely from the cells."

Nothing is proposed as a remedy for the affection; but "while something is to be advanced in the way of improvement in the means usually adopted to save our Pear trees, the information already given may be of more service in saving us from crude hypotheses and useless labor, fighting in the dark an unknown foe. In ordinary soils, good culture, managed so as to secure thriftiness in growth in the early part of the season, and thorough ripening of the wood in autumn, must be best everywhere. Everything tending to lessen the depredations of ordinary insects of every kind, whether leaf-eaters, fruit-gnawers, trunk-borers, or anything else, will tend to prevent the introduction of blight. The contagion is not usually, if ever, carried by the air, for it is conclusively established that certain species of bacteria are not commonly disseminated in this way, and the viscid character of the species causing blight teaches us it is not likely to be found in the air. But however abundant in the air currents, or upon the uninjured surfaces of the trees, it is not probable that it gains entrance to the tissues without help. Anything making punctures or wounds, even though very minute ones, furnishes this help and renders blight possible. The pruner's knife need not assist in the same way, but if it does not, scrupulous care must be exercised to avoid it. A knife used upon diseased limbs is well furnished with bacteria, in good order for inoculations. Wounds left exposed are also dangerous. Washes of different kinds have apparently been useful, and we may now recommend washing trunks and larger limbs once or twice a year with strong lye from wood ashes, crude potash, or a solution of the concentrated lye from the shops, for the purpose of making the parts clean and smooth. Exposure will, in this way, be reduced by destroying insects and their harborers by rendering less likely any cracks in the bark by the expansion of the stem.

"If we now ask what may be done after infection has taken place in the Pear and Apple, there is but one remedy which can confidently be depended upon to check the progress of the disease. This is the old one of removing the infected parts. There has been much difference of opinion as to the usefulness of this procedure, but in the light of these investigations this difference has certainly arisen from want of knowledge as to the evidence of infection in its earlier conditions, and from failure through inattention to really accomplish the work undertaken. He who cuts away only the parts already dead, or who uses a knife or saw smeared with material from diseased portions, must not wonder that his labor is in vain; neither should we be surprised if the disease spreads from an unprotected wound made in healthy portions with a carefully-cleaned instrument. It is very plain that to be successful the really infected parts, whether conspicuously changed in color or not, must be excised, and that by some method not likely by its very process to recommunicate the infection. It is true, this cure must sometimes be severe, but the proved slowness of the progress of the malady, together with its positively local character in the tree, are good reasons for thankfulness that we have so certain a remedy, and ought to give us confidence in its use. If the alkaline washes heretofore commended are applied once or twice during the season, the resulting smoothness and freshness of the bark will aid materially in early detecting the presence of the bacteria. In young limbs this can always be done as before indicated, not by waiting for the leaves to reveal the destruction already accomplished, but by evident changes occurring in the bark. In the absence of wounds or bruises upon older parts as well as knotty places from bad pruning and other causes, the thickness of the outer layer of corky substance provides an excellent protection; hence, in well-grown, well-kept trees, the parts most liable to receive disease, producing inoculation, are such as quickly show the effects of the destroyer. Among such trees careful examination once in two weeks, especially during the months of June, July and August, and as careful, well-managed use of the knife, may not insure freedom from loss, but certainly will in most cases

materially and hopefully reduce the ravages of this heretofore mysterious disease."

The practical directions here given are, no doubt, quite sound, and they accord with the practices already arrived at by horticulturists; the knowledge of the facts, however, in regard to the history of the affection, enables us to shape the treatment with more precision.—S.

SUMMER SQUASH.

MR. EDITOR:—I see that, in your excellent GUIDE, you call the Early Crook-neck the richest summer Squash, and that used to be my opinion upon the Squash question, but now I don't think so quite as much as in former times; in fact I don't think of summer Squash at all with any degree of relish. It certainly is surprising how largely our judgment is controlled or modified by our tastes or appetites; and, as men's tastes not only differ, but an individual's tastes change with the seasons and circumstances, I thought it might interest you to know how my sympathies have been squashed on the Squash question. Years ago I was sent out on my first charge. My goods were set down in front of the parsonage, and wife and I began to settle. There was a small garden attached to the parsonage, and as it was yet early fall, the Potatoes had not been dug, so we bought them of the retiring pastor. There were some Squash vines, also, the fruit of which had been gathered, with the exception of a few that were too small to pick. Now, these were the notable crook-neck, summer Squash, and the prospect of such a dainty dish in the near future was

very gratifying to us. After being on the place some eight or nine days, very busy settling our home and making plans and arrangements for the effective working of our new field of labor, an humble brother presented himself, with hoe in hand, at our front door, and, after enquiring for the Elder, asked if he could have some Horseradish. "Why, my friend," said I, "I would cheerfully give it you if I had any, but—

"Oh," said he "there is plenty at the back of the lot."

"Ah!" said I, quickly, "show me where it is, please."

With this he took me to a patch of what I should have called a species of Burdock. While helping himself to what little of it he needed, he enquired how we fared, hoped we had enough to eat, &c.

"Oh, yes," said I, "such as it is we have plenty of it; we have lived pretty well these nine days on Squash and Potatoes, and when we got tired of that we had Potatoes and Squash, and now that you have shown me this flourishing bed of Horseradish, we shall have quite an addition to our daily fare."

Of course, after this friendly chat, it was not many days before we had a proper and becoming supply to our larder. The official board of a church is an important body, a thing of large proportions, and you know, Mr. Editor, large bodies move slowly; besides which, the butcher passed that way but once a week, and we did not know it until he was gone. Still, it is a singular fact that I have never desired summer Squash for dinner from that time to this, and your terse description of its virtues only makes me smile a "dubious smile," for it has no charms for me.—EX-P.

VICTOR HUGO'S BIRTHDAY.

The grand votive celebration of VICTOR HUGO'S eightieth birthday, in February last, was the greatest popular tribute probably ever offered to a poet or artist. His house was framed in an amphitheater of foliage and flowers, although the fete occurred in the dead of winter. In front was a laurel which bore the names of his works on its leaves in letters of gold. Only French ingenuity and good will could devise the innumerable graces of the offerings. Three hundred thousand people are said to have passed in procession before his windows, including all classes, from the ministry and legislature to the humblest laborers, and in the evening there were free performances from his works. The great poet has always proved himself a devoted patriot, and fifty years of acclamation has not swerved his integrity, or developed inordinate pride. Some ladies living at his birthplace sent him some native flowers, which touched him perhaps more than the great display. He wrote to them: "In vain I have bid adieu to illusions and to pleasures; to my eyes flowers will always be beautiful, and ladies always charming. In sending me these flowers of early spring (*ces corolles printaniers*), and these perfumes of my natal valley you have added the most gracious of offerings to the sympathies which are reaching me just now from all quarters of the earth. I feel especially touched by this bouquet, and it will be the crown of my *corbeille de fete*. Thanks then, mesdames, not from the rims of my lips, but from the bottom of my heart, thanks."—W., *Tyrone, Pa.*

THE MARKET GARDENERS OF PARIS.

A correspondent of *The Garden* has been visiting the market gardeners of Paris, and reporting what he saw among them. A brief outline of his notes relating to Asparagus and Mushroom raising will probably be interesting to many of our readers.

"The *Maraicher de Paris* is his own laborer, if we except his wife and children (if he has them), and in a few instance one or two laborers who are themselves growers on a smaller scale than their employers. Of all the classes that make up the population of the gay capital, the market gardeners are the most industrious, sober, and thrifty. Everywhere I found them the very personification of politeness and goodwill, willing to *parler tres doucement*, and to tell those about them to do so too, for the benefit of one like myself, whose French is rather scanty; even though avowing at first introduction, that the object of my visit was to learn with a view to practice, and if possible compete, yet they were anxious to explain their system of cropping, its reasons, advantages, and disadvantages, and the proportions of profit from the various crops, taking immense pains with gesture and repetition to make themselves understood. A peculiarity, and perhaps no small factor in the success of Parisian market gardening, is the devotion in localities, and among individuals, to specialties, thus: Argenteuil to Asparagus culture, Arcueil to Mushrooms, Clamart to Strawberries, Montreuil to Peaches, Vaugirard and Grenelle to salad and ordinary vegetables, &c. Of course no hard and fast line can be drawn.

"At Argenteuil I received a hearty reception from M. Godefroy-Lebeuf, the chief Asparagus grower of the district, who greatly surprised me by his readiness to give information, expecting, as I did, to encounter reticence and an unwillingness to disclose trade secrets to a foreigner. The system of Asparagus culture adopted is widely different from the English plan. The plants are planted from three to four feet apart in shallow trenches, eight or nine inches deep, and the same distance apart as the plants; care is taken not to lay the plant down sideways, but to spread the roots out all around so that the crown lies flat, as it is expected to grow; for the first year, sufficient mould is pulled in just to cover the crown, and the alleys are cropped as usual. In the summer when the haulm grows high, a strong stick is inserted near each plant, to which the haulm is tied to prevent the wind waving it about and so damaging the formation of the young crowns for the next season. A little mould is added each year, till the third year, when the Asparagus is fit for cutting, and all the mould in the alley is put on the row, generally in little mounds, over each plant to the depth of six or seven inches. The cutting is done with smooth-edged knives, care being taken to take the bud out close to the crown, that the old stump may not, as in England, interfere with the growth of the new buds. Every piece of Asparagus I saw exemplified the rule of M. Lebeuf, that it wants air, and must be kept entirely free from weeds, a rule not entirely understood, I fear, among us. It will be seen that in this there is an extensive use of skilled and intelligent hand labor, and it is difficult to see how the system can be carried out with the same perfection in England where large breadths are grown."

The writer visited the Mushroom caves at Arcueil, which exist as a feature "of a special geological formation." These caves are described as "miles of disused stone quarries, which, by being built over at the top, form galleries twenty or thirty feet below the surface of the ground, dark, and with a temperature several degrees warmer than that above." "I was warned in Paris," says our traveler, "that my favorable experiences of French politeness would there receive a rude shock; that I would find the 'champignonists' of Arcueil jealous of the secrets of their calling, and unwilling to unlock the 'doors' of their caves or caverns to an inquiring foreigner; notwithstanding, I determined to try. On arriving at Arcueil one is prepared to find some unusual industry carried

on; the large tracts of undulating ground, uncultivated and unfenced, covered with a scant growth of grass and weeds, with, dotted here and there, peculiar wooden air-shafts, looking like dismantled windmills, make up a picture of desolateness and neglect that is unique in the neighborhood of Paris; one's first impression on alighting at the station is that the place is ownerless. Scrambling along the muddy track, that did service for a pathway from the station, I struck the road in which was the house of the 'champignonist' to whom I had been directed. Behind the neatly-kept house and garden was a yard with some heaps of hot manure being turned by several men, one of whom was the proprietor. On reading my introduction he politely expressed his willingness to help me, and explained the mode of preparing the manure (the same as amongst us); he then led me to a door in the middle of the yard that apparently opened into nothing, and forcibly reminded me of the 'Arabian Nights.' When this door was opened there came out a rush of confined air, laden with the musty smell of Mushroom spawn, bringing the conviction that a stay below to be pleasant would have to be short. On a shelf just inside were some small spirit-lamps, fixed to straight wooden handles about one foot long, two of which Monsieur lighted; taking one for himself and giving one to me, he bade me follow him down a steep incline, damp and slippery, from the water trickling down the walls on both sides. At the bottom of the incline, which terminated in some steps, was a chamber about ten feet square, from which branched off galleries about six feet wide, to all appearance winding like a maze in all directions. In each gallery there were three beds, one against each wall and one in the middle, of the usual conical form, though only about eighteen inches or two feet high, cased with the white dust of the pulverized stone, which I concluded, together with the perfect darkness and the absence of any covering over them, serves to give the Paris Mushrooms the beautiful white skins for which they are so remarkable. Never before have I seen Mushrooms growing so thickly; they were literally on the top of one another, making it a difficult performance to step between the beds without knocking some off. I do not know how far the galleries belonging to my guide extended, a few moments in the close atmosphere of the caverns being enough for me.

WHAT will our readers think of single plants of Orchids selling for $325. This is what one brought at a sale in London this spring. Others ranged all the way from $250 to $37.

A NEW WAY TO DECORATE WINDOWS.

The facts contained in the following statement of a correspondent of an English cotemporary may prove a hint for a new method of window embellishment that will be serviceable in some cases. Besides Honeysuckles, other woody climbers might be employed, such as the English Ivy, Clematis, and Jasmine. Proper apertures could also be provided for the admission of the plants into the room. "Some years ago, as I was passing through a room only used occasionally, I perceived an odor of fresh flowers that surprised me, as none were ever kept there; but, being in haste, it soon passed from my mind. Not long after, being in the room, I noticed the same perfume again, and this time I proceed to investigate the matter. On raising the curtain of the east window, I found that a branch of Dutch Honeysuckle had found its way between the two sashes at one corner while growing in the summer, and had extended itself quite across the window; and on the branch inside there were three or four clusters of well-developed flowers, with the usual accompaniment of leaves, while on the main bush outside there was not yet a leaf to be seen. The flowers inside were just as beautiful and fragrant as if they had waited until the natural time of blooming. Since then I have tried the experiment purposely, and always with the same result." A heavy covering of the ground over the roots of the plants with leaves, and sufficient protection of the stem outside, would allow this method to be practiced in quite severe climates. There is a possibility here that may prove of value, under suitable conditions.

NEW USE OF CORN.

In his budget speech before Parliament, in April, Mr. GLADSTONE made the following remarks: "I wish to give a little detail about the case of Maize, because it is an interesting illustration of the mode in which, where freedom is given to industry, private enterprise discovers methods of making that freedom gainful. Maize was considered somewhat hard for brewing, and it was also found, when the experiment was seriously made, that it contained too much oil, which was a very grave objection. But this further discovery was made, that this excess of oil was not diffused through the general body of the grain, but lay entirely in that which is called the germ; consequently the wit of man thus provoked and stimulated extracted the germ from the grain and turned it to its proper account, viz.: that of making oil, which we can burn in our lamps. The Maize, relieved of the excess of oil and now made suitable for brewing, was applied for that purpose; and I

understand that the result is not only satisfactory as regards the beer which proceeds from it, but likewise it is satisfactory in this point, that the residue is found to be even more available and decidedly more profitable for feeding cattle than the residue formerly obtained from Barley."

TRAILING ARBUTUS IN THE GARDEN.

Many attempts have been made to cultivate the Trailing Arbutus, but it has always proved a most intractable subject. A writer in an English journal gives an account of what Mr. WILSON has done in this way in the Westey Garden, where, he says, the plant, Epigæa repens, is "growing with great freedom, and looking as one might imagine it would do in its native habitat. I have used the word, culture, in connection with this little plant, but I should hardly have done so, for the great point appears to be to award it a congenial situation, and then leave it in undisturbed repose. This, at any rate, is what Mr. WILSON has done; he has simply naturalized it in his wild garden, and his success is perfect. The position chosen for it is a damp one, a leafy screen of Oak foliage warding off the hot sun, while plenty of light is admitted at this time of the year. The prostrate shoots travel onwards, rooting as they go, amongst a carpet of grass, the dead leaves from the Oaks being allowed to remain where they fall."

WHITE LAURESTINUS.

The Laurestinus that many of our readers cultivate and know well how to appreciate in the winter season, has a pink tinge to its buds. To many this is a desirable feature, but, for some purposes, buds of a pure white would be preferred. A variety of this plant without any of the pink color, but entirely white, is in cultivation. "Large numbers of it are grown by the Belgian nurserymen, who, with their usual astuteness, at once recognized the fact that there would come a time when it would be in great demand." The English people are now importing it, both for house and open air culture.

WHITE CLOVER AS A BASKET PLANT.—An English gardener recommends the White Clover, Trifolium repens, as a hanging-basket plant for winter. He claims that it is of easy culture, quickly makes large plants, and looks well from Christmas onwards; and that he has raised several seedlings that are improvements on the ordinary type. We all know how valuable white flowers are in early winter, and, no doubt, even white Clover would be prized then, for the white blossoms are really beautiful, and if rare would be highly prized.

A NOBLE TREE-FERN.

The *Gardeners' Chronicle* gives the dimensions of a specimen of Cyathea medullaris which is one of the principal ornaments of the temperate greenhouse at the Kew gardens. This plant was a gift to the gardens by the late Prince Albert, in 1858. The total height is twenty-eight feet six inches; height of stem, twenty feet six inches; length of frond, fourteen feet. At three feet from the ground the stem measures twenty-eight inches around, and the circular space covered by the frond is twenty-five feet in diameter. "In New Zealand this species is the Korau, or Mamaku, of Maori tribes, who, after baking in their ovens the sago-like pith of the stem, find it very good and nourishing eating."

FLOWERS ARRANGED IN A FLAT FORM.

A new device for the arrangement of flowers consists of a piece of cork about a quarter of an inch thick, circular in form, and perforated with holes, like the rose of a watering-pot. The diameter of the cork is made to correspond to the size of the saucer or shallow dish with which it is to be used. The cork floating on the top of the water supports the flowers, whose stems are inserted through the holes. For the display of small flowers and those having short stems this method seems well adapted; possibly it may be better than damp sand, though that is doubtful, but, as the cork may be preserved, it would always be at hand, and it might not be convenient sometimes to procure sand.

BARBERRY-LEAVED ROSE.

The editor of *The Garden* mentions the fact of receiving "one of the brightest, loveliest flowers that have ever come to us, and that is the Barberry-leaved Rose, with rich yellow, single flowers, having a splendid dark crimson center. This is a flower that could only be spoiled by doubling, and it is certainly a single Rose that will help to bring into cultivation some of its beautiful sisters."

Single flowers of some kinds are receiving more attention than formerly, as they properly should. Single flowers of Dahlias, Roses, Asters, Cinerarias, and many other kinds now engage the admiration of amateurs, on account of their natural grace and beauty.

THE CRANBERRY IN ENGLAND.—The fact is stated that the American Cranberry, Vaccinium macrocarpus, is now raised with success at Ashburnam Park, Sussex. The vines in peat beds are healthy and vigorous, and fruit abundantly. With the same treatment that it receives here, the Cranberry should be a good crop in England.

ROSES FOR BEDDING.

The bedding of Roses is becoming more popular as the practice becomes better known. Those with whom this royal flower is a favorite (and with whom is it not?), will derive great satisfaction in planting the monthly varieties in beds, and in the fall, either protecting them where they stand, or removing them to the cellar, according to the exigencies of the climate. Any of the Monthly Roses may be thus treated, but some varieties will be particular favorites, and all will have their special admirers. Any selection that might be made would not be satisfactory to every one. Mr. HENRY B. ELLWANGER, a devoted rosarian, and whose opinion is entitled to confidence, gives the following list of twenty-four varieties, as his preference for bedding purposes, their value ranking, in his opinion, in the order in which they stand:

Gerard Desbois—Bright red; one of the hardiest Teas.

Homer—Mottled salmon rose.

Jean Pernet—A beautiful light yellow, not as well known as it should be.

La France—The founder of the new race of Hybrid Teas; a constant bloomer, and the sweetest of them all.

Marie Van Houtte—Pale yellow, the edges of petals very often shaded with rose, producing a unique effect. A most charming sort.

Mons. Furtado—This and Jean Pernet are the most valuable pure yellow teas.

Appolline (Bourbon)—Not quite so full as some of the others, but beautiful rosy pink flowers of good cupped shape. If kept cut back, it is like La France, always in bloom.

General Tartas—Deep mottled rose; fine habit, good buds.

Madame de Vatry—Rose, with a shade of salmon.

Madame Lombard—Reddish salmon, but of variable shades. Very fine.

Sombreuil—Creamy white; a superb Rose out of Doors.

Triomphe de Luxemburg—Coppery rose.

Bougere—Rosy bronze.

Countess Riza du Parc—Bronzed rose with a shade of carmine.

La Princesse Vera—Flesh, shaded with yellow, outer petals bordered with coppery rose.

Marie Ducher—Salmon rose.

Marie Guillot—Creamy white; a lovely Rose, but unfortunately almost without fragrance.

Rubens—Flesh, shaded with pale Rose.

Catherine Mermet—Silvery pink; the most beautiful of all Teas.

Comte de Sembui—Salmon and rose, base of petals coppery yellow.

Hermosa (Bourbon)—This well-known sort is constantly in flower, but is not equal in quality to others named.

Jean Ducher—Bronzed rose.

Perle des Jardins—A beautiful straw color.

Queen of Bedders (Bourbon)—This is another variety constantly in flower, but is of rather poor growth. Color, a deep crimson, somewhat the shade of Charles Lefebvre.

Now, in the shape of a demurrer to this selection, we hear from C. NEUNER, in a late number of *The Gardener's Monthly*, who claims, as the best twelve at Louisville, the following list: Souvenir de la Malmaison, Gloire de Dijon, Sombreuil, Comtesse de Labarthe, Madame Caroline Kuster, Musk Cluster, Mad. Rivoy, Souvenir d'un Amie, Marie Van Houtte, Charles Rovolli, Madame Lombard, and Mad. Welche. And as for twelve more, he thinks they may be of any fifty good sorts found in florists' catalogues.

This is no doubt a proper conclusion, for the truth is that the facts in relation to the growth and success of particular varieties in the various regions, sections, and localities of the country have not yet been collated, and until that is done, it is not probable that any selection of varieties will be quite reliable, excepting for the location where it was made; there it may prove a valuable guide.

A Californian rosarian, of Petaluma, names for choice sorts, La Marque, Chromatella, Gloire de Dijon, James Sprunt, Appoline, Joan d'Arc, Reve d'Or, Niphetos, Bella, Viscount de Caze,

Louis Odier, Safrano, Eliza Savage, and Marie Van Houtte.

We have no doubt, if similar lists could be made in different parts of the country, the variation would be as great as seen in these. The only value to be attached to such lists, as already remarked, is local; and the probability is that most of the varieties, with proper treatment, will be found at least satisfactory wherever cultivated.

WANDERING JEW.

The Spiderworts are all interesting plants. Many of them are erect, or upright, in habit of growth, but the one illustrated, Tradescantia Zebrina, and several other species and varieties, are trailing plants, and very useful for baskets and vases. This one, which is a native of Brazil, is particularly pleasing on account of its foliage being variegated or striped with very dark or light green. The plants are of the easiest culture, if supplied liberally with water, and will strike root along the whole length of

TRADESCANTIA ZEBRINA.

their stems when touching the ground. Tradescantia Virginica was the first species introduced into cultivation. It is a hardy, herbaceous perennial, with blue flowers. It grows indigenously, according to GRAY, in Western New York, but botanists in this section lay no claim to it; if any one has found it here, it would be a pleasure to hear from them. Further west and southward it is not uncommon in rich woods. There are varieties of it with white and with purple flowers.

In Southern Ohio and Kentucky, and southward, is another native species, T. pilosa, that bears lilac-blue flowers. Still farther south is found a species with delicate, grass-like leaves and rose-colored flowers. This is T. rosea.

The name, Tradescantia, was given to this genus in honor of JOHN TRADESCANT, the elder, gardener to Charles the first. This famous gardener had a son, JOHN, who, also, had a son JOHN, and all were royal gardeners. The father's love of nature was inherited by son and grandson, and together they made a large collection of natural objects. This collection eventually passed into the hands of ELIAS ASHMOLE, and by him was presented to the Oxford University, where it is preserved, and is known as the Ashmolean Museum. A better idea may be formed of them and their work by perusal of their epitaph than by any similar condensed account; which here find:

"Know stranger! ere thou pass, beneath this stone
Lie JOHN TRADESCANT, grandsire, father, son.
The last died in his spring, the other two
Lived till they'd traveled art and nature through.
As by their choice collection doth appear,
Of what is rare in earth and sea and air.
While they, as Homer's Iliad in a nut,
A world of wonders in one closet shut.
These famous antiquarians, that had been
Both gardeners to the Rose and Lily Queen,
Transplanted now themselves, sleep here; and when
The angels with their trumpets shall awaken men,
And fire shall purge the earth, these hence shall rise,
And change their garden for a paradise.

TOMBSTONE OF THE TRADESCANT FAMILY.
Erected, 1662;
Repaired by Subscription, 1773."

The TRADESCANTS were interred at Lambeth. For some reason, the original tombstone, bearing the inscription above, has been removed from the spot where it had stood for more than two hundred years, and on the 19th of last March was placed in the Ashmolean museum.

WHITE WORMS IN POTS.

Many complaints have been made about little white worms in the soil of plant pots. For some months past our correspondents have been suggesting remedies that have proved useful in the extermination of these vermin. The following letter in relation to one of them needs no explanation, further than to say it was quite apparent to us what the mistake was in applying the remedy, in this case, but as we preferred that the writer who sent us the communication in regard to the remedy should make the decision, we stated it to him and received his reply, which is here given after the letter of complaint.

"MR. JAMES VICK:—In the April number of the MAGAZINE "E. H., LeRoy, N. Y.," tells us not to trouble ourselves about white worms in pots, or any other worms, and then gives a sovereign remedy for their destruction, by "putting matches in the soil and drain openings." What he, or she, says about their being "certain death to animal life" may be true, for they are very nearly so (and may prove altogether so) to plant life. I am generally cautious about such remedies, and prefer to let somebody else try them first, but when admitted to VICK'S MAGAZINE, and thus endorsed, I took it for granted there was no danger, and now I am cross at somebody.

"I tried the matches according to direction,

but, fortunately, had sense enough to let some of my plants escape. It was more or less severe on all of them, according to the delicacy of the plant and size of pot. My Heliotropes are shrivelled and blackened, Variegated Geraniums turned yellow, lead-color, white, and every imaginable hue, except the right one; Rose leaves scorched and used up. Some of the smaller plants, I think, will not recover. Is "E. H." an agent for a match factory, or what does it mean? Tell you readers not to try it, unless they have some plants they want out of the way, or are after the worms regardless of the plants."

"MR. VICK:—With regard to the match remedy for worms in pots, the matches are not to be lit, but used as they come—one to a three-inch pot, two to a four-inch pot, or about one match to every inch; I had in view six-inch pots when I wrote the note. I have never known harm to come from their use, and think your correspondent must have overdone the thing in some way. I hope that no one else will be as unfortunate as he."

We hope no future experimenter will fire the matches.

A FAMILY OF BOYS.

In connection with a business letter was written the following question: "Does your fancy ever follow the packages of seeds that you send out, with the wish to know into whose hands they may fall, and whose hearts they may cheer? If so, you may be interested in the accompanying letter.—A. W. R."

Your voiceless lips, O flowers, are living preachers;
Each cup a pulpit, each leaf a book;
Supplying to my fancy numerous teachers
From loneliest nook.

Were I, O God! in churchless lands remaining,
Far from all teachers and divines,
My soul would find, in flowers of thy ordaining,
Priests, sermons, shrines!

"My boys are beginning to feel the sweet influences of the springtime, and to turn their thoughts toward flower-gardening. But who are "my boys?" you may naturally question. They are society's weeds; noxious plants, perhaps you would consider them. I have high hopes, however, that they may be changed by culture into bearers of good fruit and ornaments to society. Ours is a family of forty-four boys, in the New Jersey State Reform School, all parts of the State being represented, the majority, however, coming from Newark, Paterson, Camden, Jersey City, and other large towns. These boys have led rough, hard lives, smokers, drinkers of intoxicants, thieves, profane, Sabbath breakers, Godless sons of vicious parents. We have, too, little fellows, tender plants who never knew the meaning of 'Home, sweet home.' Still another class whose parents are respectable members of society; yes, professors of Godliness, whose wayward sons are sent to us that we may straighten the 'bent twigs.' This school is on the 'open plan,' there being no fences other than those of the ordinary farmer. There are six families, and the boys have little plots of ground given them for gardens if they can procure seed for planting. My boys have been buying some pictures for the adornment of the school room, and have exhausted their funds. You would have smiled at the subscription sums of one cent, four cents, &c., up to one or two fifty cents—from the 'Vanderbilts' of the family—so I contribute this small sum for their seeds from my own slender purse. We have had a few plants in our school room all winter—some Geraniums, foliage plants, one Cactus, with German Ivy and Tradescantia in hanging-baskets; these have exerted a silent and happy influence on my lads which I hope the care and culture of their own flowers may deepen."

THE POLAR, OR COMPASS, PLANT.

A correspondent of the *Gardener's Chronicle*, undoubtedly Dr. ENGLEMANN, of St. Louis, writes in relation to one of the Rosin-weeds, or Silphiums, of the western prairies. The particular species is S. laciniatum. His account of the plant is interesting, and is as follows:

"When common here, years ago (it is now driven out by cultivation), I have often examined it with compass in hand. The leaves at their base are arranged, as may be expected, in the ordinary spiral position, but during their development the petiole is twisted so that the blade faces east and west, and its edges point north and south. The stem-leaves, being sessile, show at their base their original position, but their mid-rib is turned about the middle, or in the small upper leaves, towards the tip, so that the upper part remains fixed in its original position. The large flower-heads, on short and very thick peduncles, are almost invariably turned eastward. Sir JOSEPH HOOKER'S remark about the appearance of a plain covered with this Silphium from a railroad train is correct, and any change in the direction of the road becomes visible at once through the altered appearance of the leaves of the Compass Plant. The equal distribution of the stomta on both faces of the leaf is a matter long known to me, and this species of Silphium may be readily distinguished from all others by this character. Only S. compositum comes near to it; all the others have a vastly greater number of stomata on the under than the upper side.

But why is that so? In connection with this it is interesting to notice that the other Compositæ with vertical leaf-blades have a similar anatomical structure. This is especially the case with Lactuca Scariola—a plant unknown here before, but extremely abundant now of late years on waste places. Its leaves not only assume a vertical position, but also a meridional one, similar to those of the Silphium, though perhaps less pronounced.

BLUE FLOWERS FOR WINTER.

MR. VICK:—I always keep a large number of house-plants, but have none with blue blossoms that bloom freely enough. Can you suggest some annuals which will do well as winter bloomers?—FLORENCE.

In the way of blue-flowered annuals we know of nothing better than the Browallias, and these are really good. Browallia Cerviakowski, of which an illustration is here presented, is a fine blue with a bright center. B. elata grandiflora is entirely blue.

Well-grown plants of Browallia may be relied upon for a steady bloom from autumn to spring; though to keep up a good succession of flowers it is best to make successive sowings through the summer, so as to bring them in at several different times of about a month apart. The plants should be raised in pots and, when the convenience is at command, the cold-frame will be found very serviceable for the purpose; of course, the lights can be thrown entirely off in all favorable weather, but will afford them shelter from storms and prevent their being battered, as well as securing proper warmth on cold nights. As the plants increase in size they can at different times be pinched back, causing them to branch freely. In this way strong, stocky plants can be made, ready to take into the house, or the greenhouse, in autumn, keeping the latest grown back in the frames as long as possible. Make sowings of the seeds any time in June, July, or August.

Those of our readers who may try the Browallia in this way, we think, will be satisfied with the result.

There is a white variety that may be similarly treated, and it will give like results with its white flowers.

BLANCHING CELERY.

The method of storing Celery for winter described in February of this volume we are satisfied is the best for general use. Possibly some may be so situated that it may not be practical to adopt that easy mode, and the following method, described by the Albany *Cultivator*, may suit them. We have never tried this way of keeping Celery, and, therefore, present it to our readers for their experiment:

"Keep the plants, when taken up, entirely away from earth, if intended for winter blanching. About the middle of November they are taken up on a dry day, and placed in water-tight troughs, or other vessels, in a quite dark cellar, the plants standing erect and closely together. Enough water is poured on the roots to cover them, and the supply is continued through the winter as it evaporates. This constitutes the entire labor. The stalks are gradually and handsomely blanched in the darkness, and many new ones spring up during the winter months, especially if the apartment is not very cold, and these new shoots are remarkable for their delicacy and perfect freedom from any particle of rust, appearing like polished ivory. A small, separate apartment in the cellar, without windows, answers well for this purpose. Boxes, tubs, or any vessels which will hold a few inches of water may be employed. The plants, as grown in the open ground, need not be earthed up at all, or they may be slightly earthed to bring them into a more compact form if desired. Probably the best way would be to adopt the course which is sometimes employed, of setting out the plants in summer on the level surface of deep, rich soil, eight or ten inches, or a foot apart each way, in order that their close growth may tend to give them a more upright form. They are merely kept clean by hoeing through the season.

LARGE ASTERS.—I notice that, speaking of the Washington Asters, you say you have exhibited them five inches in diameter. Last year, from seed obtained from you, I had several of Truffaut's Pæony-flowered Perfection Asters which measured five inches and a half in diameter; and generally the flowers were large and beautiful.—P. E., *St. John's, N. F.*

THE LUPIN.

Lupins are growing wild all over America, and usually occupying the finest sandy soils. They are all vigorous plants, and desirable on account of the large spike of flowers and pretty leaflets. Some kinds are perennial and others annuals. From a paper of mixed seed I, last season, obtained some very fine kinds, the prevailing colors blue, and I do not think I had a prettier bed. On the Pacific coast I once saw Lupins six or more feet in height—about as tall

as Lilac bushes. The flowers were yellow, and the spikes of great length. As the Lupin will grow on almost any sandy spot, the seeds of this variety are gathered and sown on sandy barrens near the sea coast to be plowed under for manure, with the most satisfactory results. I was shown a piece of land bearing shade trees that was once clean sea sand, but now forming a portion of the San Francisco Park, that had been reclaimed and made fertile by frequent plowing under of the Lupin.—W. W.

THE engravings on pages 162 and 163 originally appeared in nearly their present form, respectively, in the London journals *The Garden*, and *Gardening Illustrated*.

LE DUC has resigned, and LORING, of Boston, is now Commissioner of Agriculture.

BULBS.

MR. JAMES VICK:—I have read the articles on the cultivation of the Amaryllis Johnsoni in the January and April numbers of your MAGAZINE with a great deal of interest. I, too, have a bulb of the same kind, and have followed for years the directions given in the January number, and each spring have been delighted to see the bulb put forth a flower-stem without fail. But with other bulbs I have not met with the same success. I have had for years, and still have, bulbs of the Amaryllis formosissima, one of which bloomed just before coming into my possession, but neither of them will bloom for me.

I have a bulb each of the Amaryllis longifolia, rosea, and alba, neither of which can I get to show a sign of a flower-stem, although they give evidence of thrifty growth each year.

My Imantophyllum blooms every spring, and is in bloom at present writing; but while bestowing the same care and attention upon a pair of Agapanthus, I cannot coax these to bloom. They are growing larger every year, but let each summer slip by without condecending to bloom.

Can either of the correspondents who penned the articles alluded to above help me out of my difficulty?

Is there any book published in this country that treats of the cultivation of bulbs in the United States? One that you can recommend? All the books on this topic, to which I have access, are by English and German authors, whose rules of cultivation are not adapted to our variable climate and different soil, while the American publications I have in hand are well enough for the florist, but do not answer for the amateur.—A BULB FANCIER.

We unite with "A Bulb Fancier" in calling on our friends to give their experiences in relation to the subjects here enquired about, believing that such a mode of reply would be most satisfactory. There are many practical cultivators among our readers, able to give the desired information with full particulars, and it would be a pleasure to hear from them; we leave the whole subject in their hands for response.

A PRAIRIE WILD FLOWER.

MR. VICK:—I take the liberty to send you a flower seed we get here on the prairies. I will put in a leaf with the seed. If you have it, I hope my sending you this will not annoy you. This little flower comes up before the frost is out of the ground, and grows from four to six inches high; the flowers are in a mass at the top, and when cut for vases every bud will bloom; the flowers are in shape like a mallow; the color is delicate, between orange and red, and they are fragrant. I think they would make nice border plants. As the leaves get older they have the Dusty Miller appearance.—MRS. E. M. S., *Blue Hill, Neb.*

The flower here referred to is Callirrhoe involucrata, and is a very useful border annual. We suppose most of our readers have already made its acquaintance, but, if not, we can assure them that it and other species of Callirrhoe will be found quite satisfactory in masses.

FOLIAGE OF ROSES.—One pound of whale-oil soap added to eight gallons of water forms a mixture that, sprinkled on Rose bushes, will almost ensure their freedom from insect injury.

THE GLOBE, OR GARDEN, ARTICHOKE.

MR. EDITOR:—I do not recollect that you have published anything covering the culture of the Artichoke in your MAGAZINE—I mean the true Globe Artichoke, Cynara, and not what is sometimes called the Jerusalem Artichoke, which is really a perennial Sunflower.

The Artichoke, being a native of hot countries, succeeds admirably at the south. It is a thistle-like plant, with beautiful blue, mammoth, thistly flowers. It is perennial, and we sow seeds early in the spring, in rich earth and in drills an inch or two deep and a foot apart. We transplant when about eight or ten inches in height into a rich soil, setting the plants in

rows three feet apart. Plants can be procured from suckers, and these are removed from the parent stem in the spring. The parts eaten are the scales of the flower-head, just before it opens, and it is only the lower parts of these scales that contain nutriment, and but very little at best, though it is much prized in many countries. I have eaten it as a salad in France, or attempted to do so, and in England had it boiled and served something like Asparagus, which the flavor somewhat resembles. Aside from its uses, it is a magnificent plant when in bloom. The finely cut foliage and abundant flowers, often nearly as large as a small Pine Apple, give the plant a majestic appearance. I have a friend living far north who saves plants in the cellar from the severity of the winter, but how far this is necessary I do not know. In Southern Ohio I have only to furnish protection in the open ground with leaves, brush, &c.—F. B. G.

AMERICAN POMOLOGICAL SOCIETY.

The Massachusetts Horticultural Society having invited the American Pomological Society to hold its next meeting at Boston, the eighteenth session of this national association will be held in that city, commencing Wednesday, September 14th, 1881, at 10 o'clock, A. M., and continuing for three days. This session will take place at the time of the annual exhibition of the Massachusetts Horticultural Society, which is expected to be of unusual excellence, and will give additional interest to the occasion. All horticultural, pomological, agricultural, and other kindred associations in the United States and British Provinces, are invited to send delegations as large as they may deem expedient; and all persons interested in the cultivation of fruits are invited to be present, and take seats in the convention.

This session will be held at the home of its President, the venerable MARSHALL P. WILDER, where, after an interval of years, occasioned by ill health and a serious accident, he hopes to have the pleasure of meeting, not only his old friends, but others from the various sections of our country, and again unite heart and hand with friends for the promotion of the objects of the society.

ROSES, AN EXPERIENCE.

MR. VICK:—Thinking that others of your readers may be suffering from "blighted hopes" and "blasted buds," I would like to give them my experience with a choice Rose. It was a Moss Rose, and, as I gave it the tenderest care in its infancy, I expected large returns; but each year the ends of the branches would turn black, and upon examination I found a small, white maggot, which had eaten the young buds. As the plant grew near the door, I thought I would try a simple remedy that I had heard spoken of, that of drenching it with dish-water. Commencing as soon as the plant began to show its leaves, it was soon covered with healthy buds, and my hopes ran high, and I even sent imaginary bouquets to dear friends; but I was doomed to another disappointment, for lo, and behold! it was an insignificant, single Rose, only good for its half-open bud. My experience, however, has been worth something.—MRS. O. L. H., *Ellington, N. Y.*

POISONED BY OLEANDER.—Prof. JAMES LAW states the following facts as recently coming under his notice. "A fine healthy mare ate a single tuft of leaves from a branch of an Oleander." She then traveled six miles and returned, refused her feed, and the next day died before assistance could be given.

DESIRABLE FLOWERS.

Some of the Veronicas are very desirable plants, and bloom freely in autumn, with long spikes of small, delicate flowers. A dwarf variety, called Blue Gem, is particularly valuable, as is also a variegated-leaved plant named Variegata. They are both fine for house culture. Your readers must not laugh because I recommend a Blackberry as a very handsome flower, worthy of culture in any conservatory or house. Rubus grandiflorus bears a double white flower, an inch or more in diameter, as handsome as a little white Rose. It is very useful in the winter for those who need white flowers.

VERONICA BLUE GEM.

The Dicentra, or Bleeding Heart, I have found to be an excellent winter plant, giving me fine foliage and some charming flowers. I had no prettier pot of green last winter than a plant of Thrift I potted in the autumn. It covered the entire pot and was a beautiful ball.

RUBUS GRANDIFLORA.

I did not succeed in obtaining any flowers, so I have put it in the open ground this spring. An Englishman suggested that I had kept it too warm and dry, for he stated that it is a native of the salt marshes on the coast of England. Perhaps a little salt water would help it flower. I shall try again next winter.—M.

FERN-ROOT FOR TAPE-WORM.—The roots of several species of Ferns will expel the tape-worm, when administered in small quantities to those thus afflicted. Aspidium argutum, a Californian species, has been found to act promptly in this manner.

DOUBLE DWARF TROPÆOLUM.

This is a very useful plant for baskets and vases. The color is a reddish orange, and its general appearance may be understood from the annexed engraving. Those who prefer double flowers may like this variety better than those with flowers of a natural form, and it has this to recommend it, that the flowers last longer whether on the plant or when cut. At any

rate it is quite desirable as a variety, for the number of really good vase and basket plants is not any too great. When plants are massed together and we seek only the effect of the grouping and not that of the individual plant or the individual flower, it is a matter of much consideration that a flower shall be lasting. To be sure, we should be doubly careful to associate the proper colors when we know that the eye will often rest on them; with this Tropæolum a good blue flower should be planted, and also enough white to set them off well.

SELF-SOWN ANNUALS IN KANSAS.—One of our subscribers at Smoky Hill, Kansas, writes: "The Portulaca sows itself here, as does the Ipomœa coccinea and Gomphrena. We have only to thin out the plants in the spring and cultivate the soil. The Balsam and Phlox Drummondii do wonderfully here, and so does the Pansy. Something has always destroyed our Petunia plants before flowering. The Asters seem to be favorites of the grasshoppers, as they take them first."

MADEIRA VINE.—A subscriber wishes some information about the Madeira Vine. There is nothing of easier culture than the Madeira Vine. It can be planted in the garden, in pots or boxes, vases or baskets, in a great variety of soil, and will not fail to thrive if supplied liberally with water while growing. The tubers can be kept during winter in sand in the cellar where they will be free from frost.

GERMAN SELECTION OF ROSES.

Our enthusiastic Rose correspondent, F. LANCE, sends, as a late installment, the result of a vote, last year, of three hundred horticulturists, members of the German Society of Horticulture, taken to indicate three varieties of Roses possessing in the highest degree the different qualities or characters mentioned. While this vote is undoubtedly a valuable contribution to our knowledge of Roses, it should be borne in mind that it would be doubly valuable if confirmed by the joint vote of our own horticulturists; for, while the different varieties of Roses will, in the main, develop similarly in this country and in Europe, experience has taught us that we cannot fully accept the foreign valuation of any plant, but its worth must be determined by the manner in which it acquits itself in our own country. We are pleased to see, however, that the roll of names corresponds very closely to what we might expect if it had been made by a convention of our own Rose-growers; consequently, it is a satisfaction to lay before our readers this

LIST OF BEST ROSES.

White—Boule de Neige, Baronne de Maynard, and Louise Darzins.

Shaded white, or flesh—Souvenir de la malmaison, Captain Christy, and Eliza Boelle.

Light rose—La France, Baronne de Rothschild, Marie Finger.

Deep rose—Paul Neyron, Victor Verdier, and John Hopper.

Carmine red—Marie Baumann, Madam Victor Verdier, and Alfred Colomb.

Scarlet, red, vermilion—Fisher Holmes, Souvenir de Spa, Sir Garnet Wolseley.

Purplish red, crimson—Louis Van Houtte, Senateur Vaisse, Eugene Appert.

Blackish red—Prince Camille de Rohan, Souvenir de William Wood, Empereur de Marroc.

Purple—Pierre Notting, Reine des Violettes, Gloire de Ducher.

Striped—Panache d' Orleans, Panache de Luxembourg, and Perle des Panaches.

TEAS AND NOISETTES.

White—Aime Vibert, Marie Guillot, and Sombreuil.

Pale rose—Souvenir d' un Ami, President, Mad. de Vantry.

Shaded rose—Homere, Mad. Celine Noirey, Mad. Berard.

Yellow—Marechal Niel, Perle de Lyon, Perle des jardins.

Shaded yellow—Gloire de Dijon, Belle Lyonaise, Adrienne Christophle.

Three best Mosses—Soupert et Notting, Cristata, and Rosa centifolia muscosa.

It was also shown that the five Roses most sought for and generally diffused are Gloire de Dijon, Souvenir de la Malmaison, General Jacqueminot, La France, and Marechal Neil.

Five best varieties which bloom without interruption are Gloire de Dijon, La France, Souvenir de la Malmaison, Reine de l'isle Bourbon, and Mad. Alfred de Rougemont.

Five varieties distinguished for perfume are Marechal Niel, La France, Gloire de Dijon, Rosa centifolia, and Pierre Notting.

Five hardiest varieties are General Jacqueminot, Jules Margottin, Triomphe de L'Exposition, La Reine du Midi or Rose de La Reine, and Baronne Prevost.

Three best summer-bloomers are La France, Jules Margottin, and Louise Odier.

Five best autumn-bloomers are La France, General Jacqueminot, Prince Camille de Rohan, Pierre Notting, and Victor Verdier.

The ten best novelties introduced from 1875 to 1878 are Captain Christy, Madame Marie Finger, Perle de Lyon, Abel Carriere, Eugene Furst, Jean Liabaud, Perle des jardins, Duchesse de Vallambrosa, Star of Waltham, and Madame Lombard.

THEORY AND PRACTICE.

Not all of us are able so fully to put into practice our theories as the writer of the following letter, and we are confident that, in this case, well-considered principles enrich and ennoble the practical details of everyday life. Believing that some of the remarks in the letter may prove incentives to good for others, we give the letter entire :

"Inclosed please find the amount for the MAGAZINE. Sickness and home duties have prevented me sending on time, but the returning Robins and Blue-birds remind me that, away down in the future somewhere, the gardening time lies, and so I must be ready with my MAGAZINE and seeds. I prize the MAGAZINE so highly that I have mine bound in half-morocco.

"I have sometimes sent you a line, when I had no room for experiment save a small yard where I could have a few flowers outside. Then I was a school-marm, always enthusiastic in trying to teach the theory of plant-growing as part of botanical science, but after twenty years of theoretical gardening in this way, I have leased for life a real, actual garden, with a farm and noble husband attached, and for nearly three years the new revelations of being a farmer's wife have been unfolding themselves to me. But I find the long familiarity with the

botanical history of plant-life only intensifies my interest in everything that grows on the farm.

"The seeds and plants you have sent me at various times has each a story of its own; some were failures, but most were grand successes. The Pansy seeds sent two years ago proved to be a marvel of joy to us all, and the plants are now looking green and fresh, after living over this, their second winter. My Parsnips, last spring, must have been nibbled at by the Chinamen, for, after digging some that were eighteen to twenty-two inches long, I found them broken off. I cannot report for this season, as they are still locked in the earth. My Winter Cabbages for two years have succumbed to the worms, despite all my frantic efforts to get my share of said vegetables. Twenty-five cents worth of white hellebore saved my Currant and Gooseberry crop, and the bushes as well. So I find gardening, like school-teaching, is an eternal warfare with some kind of an enemy. But, as there come many bright hours and sweet spirits in the school-life, so the memory of my Geranium and Verbena beds, from the plants you sent last year, drive out the unpleasant thought of the bugs that ate my Hubbard Squashes in one night, the worms that ate my Cabbages, the Summer Squash that refused to be sweet, for into every life must come some failures and blights, but so much that is beautiful with all.

"I sometimes wish you could take a bird's-eye view of all the beauty you have sent into people's homes. There is so much hard work to do on the farm and in the farm-house, that these weary laborers, of all others, need all the restful forces possible, from the good garden, well-kept yards, and precious flowers that breathe their very perfume into our souls. It is the slovenly, slip-shod, ill-conducted style of farming, the cheerless, inconvenient, unattractive farm-house, that is giving to this all-important business so much odium. The man who has no thought above the clod he plows, the woman who has nothing more beautiful in and about her home than pots and skillets, need expect no other title than that of country "clod-hoppers," and that their children will fly to other quarters and other pursuits where there is more to attract. Wherever I see a neat farm and home, there I see flowers and more or less refinement, and I am thankful for every influence that has made these bright homes, for I live in one of them, and I owe some of my great pleasure in it to you."

WATER, frequently applied with a syringe, will do wonders in keeping down plant insects.

PLANT QUERIES.

1. I would like to know what is the best treatment for a Lilium auratum, beginning with the care and setting of the bulb?

2. Also, what is to be done with Heliotropes to prevent their growing scraggy and putting out leaves only at the ends of the branches?

3. What shall I do with a Hydrangea which has been set for three years without blooming? It was a good-sized plant when I got it, and appears to be in excellent condition, but has never blossomed.—MRS. W. R. P., *Portland, Oregon.*

1. Any good garden soil is suitable for the Auratum Lily, but it should be well drained, as too much moisture about the bulbs induces decay in them. The bulbs should be set at least eight inches deep. In the high latitudes of Oregon there is probably little danger of the heat of the soil being too great for the roots; such, however, is the case in this section and further south, and to obviate this difficulty it is well to plant Lilies in mixed beds of perennial plants, or with Roses or other flowering shrubs. Do not mix manure with the soil at the time of planting; a mulching or top-dressing of old manure in the fall, and left on all winter, serves the double purpose of nutriment, by its leachings, and protection, by preventing the ground from freezing, thus allowing new roots to form to be ready for active work in spring.

2. Young plants of Heliotrope may be pinched in at the ends of the shoots, and thus be made to assume a branching, bushy form.

3. The Hydrangea in question should be cared for as heretofore, since it is healthy and flourishing. The fact that it is a strong plant will ensure a large amount of bloom when it arrives at a blooming condition; the new, rich soil undoubtedly induces a luxuriant growth, and thus delays the time of flowering.

PROPAGATING ROSES IN CALIFORNIA.

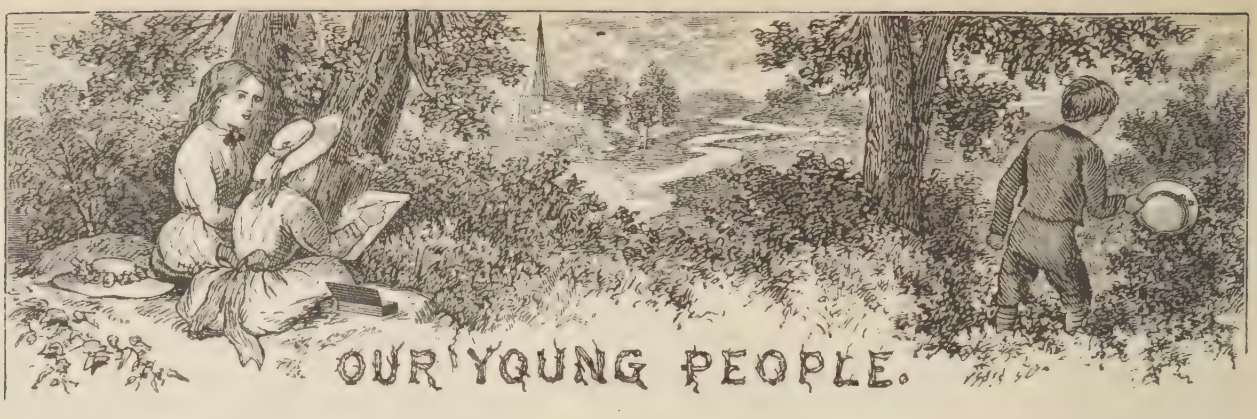
MR. VICK:—I will give your readers my way of raising Roses from cuttings, with which I have decided success. After the first rains I trim my Roses and set the cuttings on the south side of a building. By the end of February they will have formed a callous, and I then transplant them to the places where they are to grow.—J. C. M., *Mt. Eden, Cal.*

This method of raising Roses may, without doubt, be very successfully practiced in California and in some parts of the South, but in the Northern States it is useless.

TRANSPLANTING ROSES AT THE SOUTH.

MR. VICK:—What is the proper time to set out Rose bushes in this latitude, 31° north, Parish of West Feliciana, Louisiana.—R. G. S., *Bayou Sara, La.*

In the southern country the best time to plant Roses and other shrubs and trees, is from October to the 1st of February. Planting in the fall, or in the first month of winter, is better than delaying it later.



MY AUNT HESTER.

One fine afternoon in spring I stepped off the cars at the small town of B. to find my kind old Uncle Joshua awaiting me.

Now, notwithstanding the bright weather and my youth (I being only eighteen), if the truth must be told, it was with rather a heavy heart that I walked along by Uncle Joshua's side. His benevolent old face was shining with pleasure as he escorted me along, and I reproached myself that I could not heartily reciprocate the feeling; but the thought of Aunt Hester, that prim, exact old soul, threw a cloud over my spirits that I could not dispel.

When a little, playful girl of twelve, my mother had sent me to pass a summer with Uncle Joshua, her brother, and Aunt Hester, his wife, while she and my father were traveling for the benefit of her health. That long, weary summer I could never forget. My aunt no doubt intended to be very kind to her little visitor, and required nothing of me in the shape of work, but the dullness and primness of Aunt Hester's house were too much for me—a lonely little child, who had been mother's only pet and father's darling. So while mother was regaining her roses among the mountains, her little daughter was moping and losing her strength at Uncle Joshua's. How shocked mother and father both looked when I met them, and how anxiously they inquired if I had been very ill. After that visit my home seemed to me a dearer spot than ever, and until now, in response to an urgent invitation from Uncle Joshua, I had never had the courage to repeat the visit.

But to return to Uncle J. and myself as we wended our way towards the cottage I remembered so well. As we turned the corner I glanced toward the place the prim little house had occupied—the only tenement without a bush or vine, or even a front porch for ornament. I did not see it. I saw a neat white cottage, with ornamental porch over which a climbing Rose was trained on one side, and on the other a Honeysuckle vine. Then, too, as we approached, I saw in the porch a flower-stand filled with pots and boxes of flourishing plants bright with bloom.

I turned to Uncle Joshua in surprise. "Why, Uncle, I didn't know you had moved! I thought to find you occupying the same house."

"We do live in the same house, my child. It has been changed a little, though. This," opening the gate, "is the same place you visited six years ago."

I had no time to say more, for Aunt Hester had heard our voices and was coming forward to greet me. Could this be Aunt Hester? Like my uncle's, her hair was thinner and whiter than when I had last seen her, but her face was changed, too—so changed that I should scarcely have known it to be the same. The eyes looked kinder, the mouth more pleasant, and the whole expression, instead of being one of sharpness, was one of mildness and benignity. She met me with a cordiality that astonished me, and after conducting me to the room prepared for me, left me that I might refresh myself by bathing and removing the traveling dress which I was finding uncomfortably warm.

As I glanced around the room, the same apartment I had occupied when a child, and with most of the furniture the same, I wondered more and more. On the bureau stood a white vase filled with fresh Roses and Star Jessamine. Did Aunt Hester herself put them there? Surely I had misjudged her when I knew her before. Then I thought her the embodiment of precision and hardness. I could not remember seeing her show a symptom of tenderness, or even satisfaction, as she pursued her daily round of duties; and these were so numerous that it seemed to me she never sat down except at meal times. This Aunt Hester who had met me at the door gave me the impression of a dignified but kind old lady, far more attractive than the one I remembered.

While making my toilet I resolved that I would find out from Uncle Joshua, when we should be alone, some explanation of the wonderful change in his wife. As for my good uncle, he had always been a jolly, sunshiny

sort of man that nothing could depress, and except that his wrinkles looked a little deeper, and his hair thinner and whiter, I saw no change that six years had wrought in him.

Repairing to the sitting-room I found that preparations for an early tea had been made, and that it would be served on the veranda at the back of the house. This veranda was festooned with vines, and in the center of the table was placed a vase of bright flowers.

The tea-table, with its snowy linen and china, and floral adornment, and with its vernal surroundings, presided over by the silver-haired couple, completed a tableau which will always be a pleasing one in my memory.

With cheerful chatting the evening closed, and I sought my chamber with a lightened heart. My slumber was sweet and refreshing, and I awoke early in the morning feeling that my three weeks visit would probably prove a pleasant one.

After breakfast, when Aunt Hester had left Uncle Joshua to entertain me, I ventured to ask how long had Aunt Hester been cultivating flowers.

"Oh! a long time, dear, almost ever since the summer you spent with us. I'll tell you how it came about. Hester had a letter from a niece of hers, a poor thing who was a widow with one mite of a child. She wrote that she had been sick a long time and was very needy, and as Hester was her only relative she begged her to come and see her. Of course, we both went, and we found her almost gone—too feeble to travel. She died in a few days, and then we came home and brought the baby with us. It had been sick, too, and was a poor, puny, little scrap of a thing, about three years old, but just as patient and sweet and bright as any you ever saw. At first Hester found the child a sight of care and trouble, but she soon got to be so fond of it that she did not think it troublesome at all. You see it was such a good little thing. After a while little Katie got stronger and would run about and play a little, but most of the time she would follow Hester around and chatter to her with her sweet little voice, that always made me think of a little bird.

"One day in early spring some one knocked at the door, and, when I opened it, there stood a man with a large waiter on his head, on which were several pretty plants in pots. I told him we did not care to buy any, but he said he was very tired, and begged that he might set them down in the room until he had rested a little. Of course, I agreed to that, and, while the man was resting, my wife and the little one came in. I wish you could have seen the child. She danced around those plants with her eyes shining and a bright color in her cheeks. 'Oh, Aunty!' she would say, 'de pitty fowers! de pitty fowers!' She didn't meddle with them, but just seemed to enjoy looking at them. The man said, "You'd better take them, ma'am, I'll sell them very cheap, and they'll please the baby so well.'

"'Oh, Auntie! oh, Auntie!' was all the little one could say, and I was never more surprised than when Hester drew out her purse and asked what he would take for one. He mentioned his price, but insisted on selling the lot to her, as he was very tired of carrying them about. She finally took them all—about half a dozen—and little Katie seemed almost wild with delight. She hugged and kissed Hester over and over again, and we both thought we never saw a little thing so happy. And she never got tired of looking at them; every bud that came, or new leaf, she would discover and talk about. She began to improve, too, very fast in her health, and her cheeks looked really pink.

"Then I began to call her little Daisy, and she was so pleased with the name, Hester took it up, too, and soon everybody called her little Daisy. She stayed with us two years after that; but one cold winter night she had been walking around the plant-stand, looking at the flowers and saying how cold they would be in the middle of the night, when I thought she looked a little pale, and called her to come and sit on my knee.

"'It seems to me,' I said, 'that my little Daisy isn't quite as rosy as common. What's the matter with her?'

"'Nothing,' she answered, 'only I'm so tired.'

"She was soon asleep, but had a little fever that night. She was never rosy and well again, but just faded away, and in the springtime we put her in her little grave."

"And Hester could never give up the flowers," said Uncle Joshua, wiping his eyes, "she keeps them and loves them for little Daisy's sake. The little thing loved them to the last of her life, and died with a few leaves and blooms in her hand."

After Uncle Joshua's simple narrative I could understand that the little child's influence had softened Aunt Hester's heart, and brought to light qualities she had hidden away; giving her even a love for plants and blossoms.

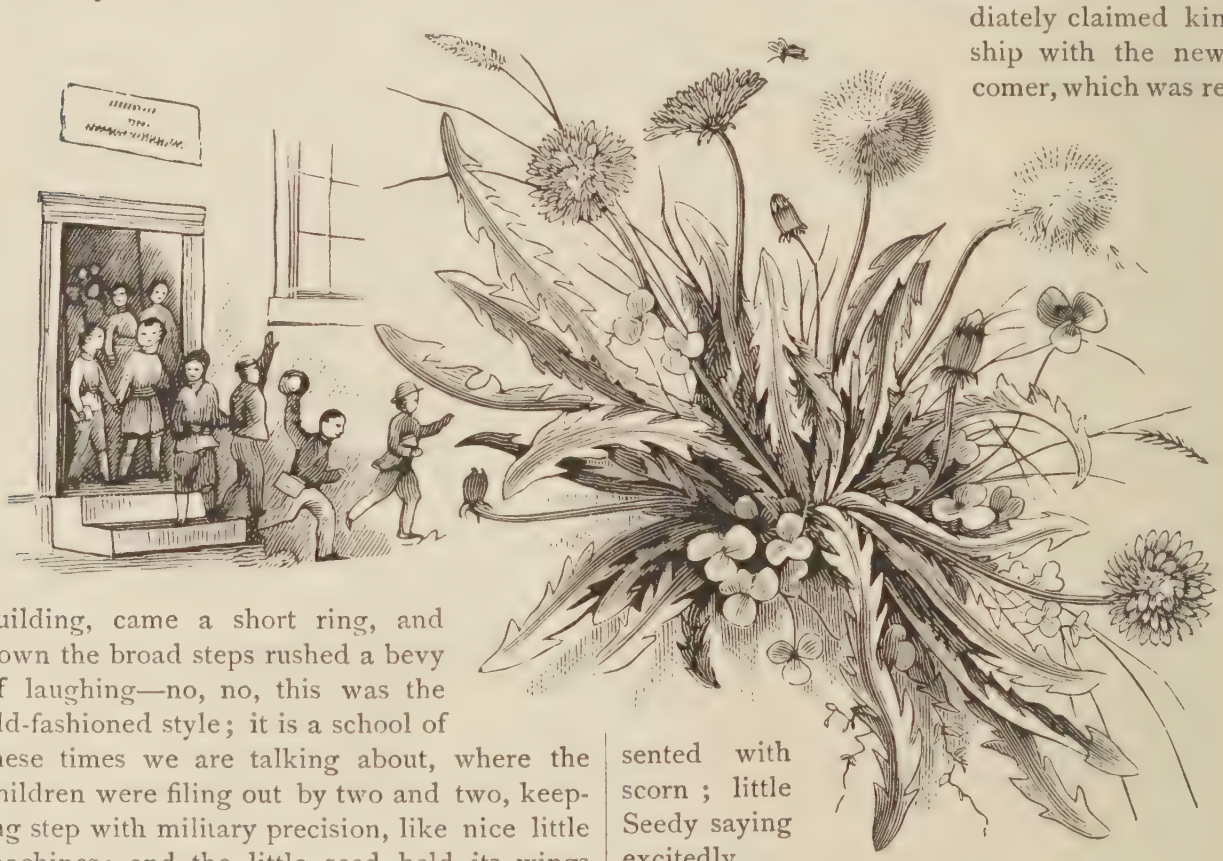
The rest of my visit passed off very pleasantly. I found Aunt Hester could sit down and enjoy chatting like most old ladies, and that she was by no means the same that I had expected to find her. She took me to the spot where little Daisy had been laid, and there I saw many plants with perfumed leaves and

bright blooms, kept flourishing and bright by Aunt Hester's care.

Little Daisy's life was a short one, but surely she did not live in vain. To unlock the springs of human kindness and love in one hard, callous heart, and open it to the reception of other blessings, certainly is to have performed a great and noble work.

NO KIN.

One breezy June day a downy-winged Dandelion-seed from a broad meadow, came sailing into a pretty village to look up the children and find out where they were all hidden, and why they had not been after the wild Strawberries, as usual, that sprinkled so thickly its meadow home. Just then, from the belfry of a tall



building, came a short ring, and down the broad steps rushed a bevy of laughing—no, no, this was the old-fashioned style; it is a school of these times we are talking about, where the children were filing out by two and two, keeping step with military precision, like nice little machines; and the little seed held its wings and swayed over their heads a moment, thinking—

"O, what if we had to be hampered like these,
And drift off sedately by twos and by threes,
And never dare sail on a frolicksome breeze!"

The mere idea of such proper behaviour was dreadful, to be sure; but presently the boys and girls found their heels and their tongues, and little Seedy, breathing more freely, drifted off over the heads of a brother and sister who were saying, as they went homeward, that school being now ended for the summer, it need not matter if the Saturdays were rainy for a whole moon together, as they could choose their days for going after wild-growing things, since not one could be found near their home of late, not even a Dandelion with its yellow heads and hollow seed-stems, "just made for us children" they said. Whereupon little Seedy began to hum to itself

"When you go you will find over valley and hill,
A few golden Crocus, that are waiting there still
To get hoary like me, before roaming at will."

"What was that?" queried the little miss, looking upward as they passed through the gate.

"What was what? I didn't hear anything," rejoined her brother, as he took off his hat and made a dash after the little seed-balloon sailing overhead. But it danced off on the jetties of wind that he made, and soared into a safe corner under the broad eaves of the cottage. There it found a forlorn thistle-seed that had been prisoned during the whole winter past by a stray thread from a spider's loom. It immediately claimed kinship with the newcomer, which was resented with scorn; little Seedy saying excitedly,

"I know that your mother, and all her line,
Wore daggers and spears on her drapery fine,
And stood like a bristling old porcupine,

and was the terror of everything and everybody around!

"Among all the children, no laddie or lass
Without peril could ever familiarly pass;
Nor even the cattle, when browsing the grass.

But it's not so with our people. I used to hear my mother say that

She was never so happy as when she could feel
The soft hands of children, and hear the bright peal
Of sweet, ringing laughter, their mirth to reveal."

By this time the Thistle-seed was thoroughly roused, and rejoined with some spirit, "In the old home we were all crowded together as thick as—well

As thick as the children who lived in a shoe,
So I left and was free and as giddy as you;
'A beautiful nothing, with nothing to do,'
As somebody said of me, though it's not true;

for all of our family have a great mission to perform; and—"

"O, yes, I understand—

While Satan can furnish employment still
For indolent ones, you've a mission to fill
That will sow all the beautiful country with ill."

And little Seedy whisked off and planted itself in the corner of a poor woman's back yard, to make a bright-eyed little girl glad some day; and a yellow bird hunting for a building place, spied his favorite food and snapped the Thistle-seed into its crop where it could do no harm. —"PROXY."

THE CALLIOPSIS.

Single flowers are now popular, for there is fashion in flowers as in most other things, and the young ladies, and other people, too, just now take a great fancy to single flowers, especially white and yellow. They gather the white Daisies in our fields and meadows, and a yellow, daisy-like flower, Rudbeckia hirta, is a special favorite. This, too, grows in the field, usually in the grass that is allowed to grow for hay, and about the fences of meadows. Of all the single flowers, I know of none better than the varieties of Calliopsis. They are the most easily cultivated of all the annuals. The plants are of loose habit, grow about two feet in height, and a little bed looks almost like a swamp of yellow flowers. There are several varieties, of different shades of yellow, with a brownish ring in the center. I sow seeds in the garden, where the plants are to bloom, and then thin out the plants so that they will stand some ten or twelve inches apart. Extra plants I find plenty of opportunity to dispose of to the children of my neighbors. Since I commenced doing so, three years ago, they expect a few plants of me every spring. I have had to enlarge my stock of plants, and in growing them I am very successful, so, in addition to those mentioned, I have been in the habit of growing a hundred of Aster plants and Balsams, Cockscombs, Convolvulus, Dianthus, Petunias, Zinnias, and the like, and though this causes me some trouble and no pay in money, it gives me a good return in pleasure, for I can see the fruits of my labors in the gardens, not only in our own beautiful little village, but for miles around.—ELLA S.

THE DOGS.

We were once shown an autograph album in which we found the autograph of the famous SETH GREEN, who has done so much to stock our rivers and lakes with fish, so that the boys and girls can have a good time at fishing, and return with something more satisfactory than wet feet and empty stomachs, and stories of how many big fish they almost caught. SETH, for that is what his familiar friends call him, and our young readers will remember the advice he recently gave in our MAGAZINE to a young lady, about the care of fish in an aquarium, seems to have a natural affection for all living creatures, so we thought we would read the sentiment to which he had attached his name. When young people write in an album it is the right thing to give some kind of a sentiment, but old people may simply say, "yours respectfully," and then sign the name. SETH never acknowledges himself to be old, so he always gives a sentiment when the young ladies wish his autograph in their albums. So we read these characteristic lines, "Be kind to your dog; you will never have a more faithful friend."

We think all good boys like a dog, and dogs like all good boys. When we were a boy the dogs got us into more trouble than all other things. The dogs of the neighborhood all liked us, and would leave their homes and follow us everywhere. The owners would complain, but how could we help the dogs liking us. We were told to kick them, throw stones at them, and drive them back, but this we never had the heart to do. The idea of kicking a dog that would come to us with love in his eyes, and with such a loving wag of his tail, was too absurd and cruel for anything. Sometimes when it was cold we would smuggle one or two up the back stairs to our bedroom for a warm night's rest, but this was only from kindness to the dogs, and not from any desire to interfere with the rights and property of our neighbors. They did not, however, always see it in this light, and hence the trouble.

One of the most interesting paintings we ever saw was in a gallery in Europe. It was a representation of that beautiful story of our Saviour of the Prodigal Son. The father and the family dog had at about the same time discovered the son returning in his poverty and rags, and both had started to welcome him home, but the dog had out run the old gentleman, and was leaping upon the returning boy, and licking his hands and face with the greatest affection.

What made us think about dogs just now was the receipt of a little pamphlet from G. B. SEEBACH, of Peru, Ill., treating of dogs and their diseases and uses, from which we take our engraving of the Black and Tan Terrier, a useful dog for keeping places clear of rats, and a very faithful watcher for the house.

TWO PRETTY SPRING FLOWERS.

To the young readers of your MAGAZINE I wish to recommend two of the prettiest little early spring flowers that I am acquainted with. One is the Lily of the Valley, that every one likes, and that is so popular in May as a button-hole flower. Its white, drooping, graceful bells are charming indeed, and it is exceedingly sweet.

The other flower to which I allude, is the little Grape Hyacinth with its erect spikes thickly clustered with blue and white flowers. These both flourish well in our gardens with very little care. A year ago last autumn I gave half a dozen from my garden to a young lady in our neighborhood, and she has now quite nice little groups, and is very much pleased with them, so I thought I would suggest that next fall those of your young readers who love flowers should obtain some roots. Neither seem to object to a little shade, and I have taken advantage of this fact to fill several places in my garden that previously have been bare.—J. B. C.

PAINTED EXPRESSLY FOR
VICKS MONTHLY.

GROUP OF SALVIAS